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China Report

AGRICULTURE

No. 128

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CONTENTS

I. GENERAL INFORMATION

EXPERTS ON MEASURES TO PROTECT NORTH WHEAT CROP

OW100647 Beijing Domestic Service in Mandarin 1200 GMT 7 Mar 81

[Text] Organized by the Ministry of Agriculture, a number of wheat experts in Henan, Shandong and Hebei Provinces and Beijing Municipality recently made a survey of the growth of wheat in Henan for a comprehensive analysis of wheat production in some of the north China provinces and municipalities, according to a correspondent of this station. The experts made an emphatical call for stepped-up spring field management of the wheat crop.

A total of 156 million mu of wheat were planted this year in Hebei, Shandong and Henan Provinces and Beijing Municipality, which are the major wheat-producing centers in China. In view of the current growth of the wheat seedlings and the problems that may emerge in the days to come, the experts suggested that all localities should adopt the following four technical management steps according to local conditions.

1. Pay attention to soil moisture conservation in the wheatfields in the face of the dry spell. Since last winter, except for southern Henan and eastern and southeastern Shandong, which have had some rain and snow, the wheat crop in Hebei, Beijing and northern Henan and northwestern Shandong has been affected by the drought. In some localities the wheat ears have turned dry and withered. Since the wheat crop will need more moisture and fertilizer after becoming green again following winter dormancy and will also need an increase in soil temperature to hasten its early-stage growth, we must pay particular attention to the work of loosening the soil and removing (?borers) and preserving soil moisture at the same time.

2. Apply top dressing in good time in the low-yield fields and to the third grade seedlings to help the weak seedlings grow strong as quickly as possible.

3. Apply fertilizer and water in a scientific and proper manner when the wheat crop becomes green again to prevent lodging of the seedlings as they grow.

4. Take action as early as possible to make good preparation against hot and dry winds and the spread of diseases and pests in order to wrest a bumper harvest of the summer-ripening crop.

CSO: 4007

RURAL MARKET PRICES STABILIZED, REDUCED

Beijing GONGREN RIBAO in Chinese 13 Jan 81 p 2

[Article by Jin Ye [6855 0673], "Nationwide Price Decline in the Midst of Stability in Rural Market Trade"]

[Text] The trading situation in rural markets throughout the country is heartening. The markets contain abundant supplies of goods, trading is lively, and already stable prices have dropped.

Statistics from 206 markets show a volume of business during the third quarter of last year that was 40 percent higher than for the same period during the previous year. Varieties of goods reaching the market picked up from the earlier 90 increasing to between 200 and 300 varieties.

Accompanying the constant growth in the rural economy and the increase in commodities coming into markets has been a year by year drop in price during the past several years for goods sold in the markets. The gap between market prices and list prices has gradually narrowed over the years. Prior to the 10 years of upheaval, the market price in 1966 averaged only 25 percent more than the list price in state-owned enterprises, but by the end of 1976, average prices in the markets were 68 percent higher than list prices. In the case of foodstuffs, in particular, the price rise was the worst. At the end of 1965, the sale price of rice was 0.269 yuan per jin. By the end of 1976, the price had risen to 0.481 yuan, or more than three times the list price. Now, there has been a fundamental turnaround in the year after year rise in market prices. Between the end of 1977 and the end of 1979, average market prices declined 2.4 percent, 6.5 percent, and 1.5 percent respectively over the year before. In comparison with list prices, as of the end of 1979 the gap between higher market prices and list prices narrowed by 35 percent as market prices fell. During the third quarter of last year, a further 19 percent shortening over the previous year occurred. Now, except for grains and oils, which continue to cost more than double the list price, the gap in price for other goods is not great. In some places, prices for pork, fowl, eggs, and fruits are lower than list prices.

9432
CSO: 4007

BEIJING RADIO COMMENTS ON RURAL PRODUCTION RESPONSIBILITY

[Editorial Report] OW101631--Beijing Domestic Service in Mandarin at 1200 GMT on 9 March carries a 1.5-minute report on the decision made by commune members in (Yaergou) production team of (Xijiao) Commune, Guyuan County, Ningxia, to improve the prevailing system of contracting for a certain portion of a job instead of adopting the system of fixing output quotas on a household basis. The reason given by the commune members for their decision was: "(Yaergou)'s collective economy is fairly consolidated and its collective accumulation fairly good. Since the implementation in 1979 of the system of contracting for a certain portion of a job and paying according to the amount of work done, the distribution of income has become very steady and the commune members' enthusiasm for production high."

The same cast also carries a 1-minute report on the decision made by commune members in (Jianjing) Commune in Fuzhou Municipality, Fujian Province, to adopt the system of fixing output quotas on a household basis. According to the report, they have not been happy with the system of contracting for a certain portion of a job.

The two items are followed by a 3-minute station commentary entitled "Proceed From the Actual Situation and Comply With the People's Desire in Implementing the System of Responsibility in Production as Quickly as Possible."

The commentary says: "Implementing the system of responsibility in production and stabilizing it as quickly as possible is a major task in rural work and an important measure to win a number havest in agriculture this year. The experience in the various localities proves that to set up a system of responsibility in agriculture, it is necessary to proceed from the actual situation, act in line with local conditions and do things according to the views of the majority of the people To proceed from the actual situation means to proceed from the situation of loc l productive forces. The selection of a system of responsibility in production is determined by natural conditions, production needs, the degree of farm mechanization, the economic situation, the commune members' political awareness and the cadres' management capability in the locality."

Objecting to the selection of a system of responsibility in production along a single pattern, the commentary continues: "It is necessary to let the masses fully discuss and determine in democratic way the system of responsibility in production they want. The responsibility of the leadership is to explain to the masses the characteristics of the various systems of responsibility and their

advantages and disadvantages. The leadership must not issue arbitrary orders, act on subjective views and stubbornly promote a particular system of responsibility. In fact, different systems of responsibility may be implemented within the same production team. In the course of practice, the masses will unify their thinking as to which system is most efficient."

The commentary notes: In some remote mountainous areas and poor districts, some of the communes and production teams depend on bank loans in production and on state relief for their livelihood. If the masses in such areas and districts want to adopt the system of fixing output quotas on a household basis, we must support their demand and try to help them stabilize the system for a considerably long time.

In communes and production teams where the collective economy is fairly stable and production is carried out well, we must concentrate our efforts on further improving the prevailing system of responsibility in production and continue to develop and consolidate the collective economy, provided the masses are satisfied with the system.

The commentary concludes by calling on the leadership at all levels to act according to the actual local situation and to help in implementing the system of responsibility in production so as to reap a good overall bumper harvest this year.

CSO: 4007

PRACTICAL RESULTS FROM APPLICATION OF AGRO-SCIENCE, TECHNOLOGY ACHIEVEMENTS

Editorial Comment

Beijing RENMIN RIBAO in Chinese 20 Jan 81 p 3

[Text] Editor's Note: Last February, the National Science Commission issued a notice proposing that each jurisdiction adapt general methods to local situations in vigorous promotion of achievements in agro-science and technology. Heartening results have been attained during the past year. Some experiences from Shandong, Gansu, and Hebei reported here demonstrate that real economic benefits from the promotion of achievements in agro-science require, first of all, an adaptation of general methods to specific situations with local testing and demonstrations rather than "cutting everything with the same knife" in a resort to coercion and commandism. Second, priority for promotion must be given to those scientific and technical accomplishments that give quick results and high economic benefits; there can be no mechanistic approaches. Third is to miss no opportunities, but to practice tenacity. Fourth is a need to rely closely on experts in agricultural science and technology and on agricultural technicians.

Planting of Superior Cotton Variety

Beijing RENMIN RIBAO in Chinese 20 Jan 81 p 3

[Text] After 4 years of area tests of "Lumian No 1," a new variety of cotton bred in Shandong Province, in 1980 its cultivation was extended to 8 million mu for a regeneration of large area cotton varieties throughout the province. This was the main reason for the unprecedented bumper harvests of cotton in Shandong during 1980.

Shandong Province has always been the foremost cotton producing province in the country, but during the 10 years of catastrophe, cotton output dramatically declined. Despite an upward turn in 1979, total output did not exceed 3.33 million dan. In 1980, however, output from the 10.9 million mu of cottonfields throughout the province totaled 10.5 million mu, a more than two-fold increase over 1979.

"Lumian No 1" is a new variety of cotton bred by the Shandong Cotton Institute in 1976 through the use of radiation techniques in breeding. A series of area tests throughout the province conducted between 1976 and 1979 have demonstrated its properties of early ripening, bumper output, wide adaptability, and strong resistance to disease. Output from it is commonly more than 30 percent higher than from existing degenerated cotton varieties. In order to make sure that this superior variety would be planted widely, in 1980 the Shandong Provincial Agricultural Commission and the Science Commission took the following three actions:

1. Genuine full play to the role of experts. In the spring of 1980, the Shandong Provincial Scientific Commission and the Provincial Agricultural Society jointly convened a technical symposium on bumper cotton output to which was invited nearly 100 experts, teachers, and technicians engaged in scientific and technical work on cotton. At this meeting, technical problems pertaining to promotion of the cultivation of "Lumian No 1" were studied. After the meeting, cotton production technical advisory groups (or units) composed of cotton experts, technicians and cotton planting experts were established in all cotton growing areas. At the end of October, the Provincial Agricultural Society and the Provincial Cotton Institute organized more than 10 experts to conduct on-site technical inspections in major cotton producing counties and to make recommendations on how to maintain increased cotton production.

2. Vigorous dissemination of scientific cotton growing techniques. By way of providing mastery of the characteristics of "Lumian No 1" superior variety to the broad masses of cadres and people, the Provincial Cotton Institute wrote an article for the popularization of science titled, "How to Grow Lumian No 1 Well," which was printed in several hundred thousand copies by the Provincial Scientific and Technical Press. Each prefecture and county also organized the writing of pertinent materials for the spread of scientific techniques. Some communes and production brigades also used technical lectures, broadcasts, and exhibitions in a vigorous effort to impart technical knowledge about the growing of "Lumian No 1." Incomplete statistics show the training in cotton growing techniques of 160,000 key cadre throughout the province.

3. Adoption of technical measures adapting general methods to specific situations. Since soil quality and soil fertility differ from one place to another in the province, the technical measures adopted in the promotion of the superior variety had to differ too. In Liaocheng and Dezhou prefectures, where sandy soil cotton fields are numerous, sowing at specific distances apart was done in the main, whereas in Wenshan and Yanzhou counties where fields tend to be clayey, wet, and low-lying, direct seeding, dry seeding, or water planting in pockets [shuizhong baobao 3055 4467 0545 0545] was used. In addition, different planting densities were set depending on differences in water supply and fertility conditions. This was a major link in improving quality of sowing, and in assuring a full stand of cotton shoots from a single sowing of cotton.

Scientific Farming Techniques in Gansu

Beijing RENMIN RIBAO in Chinese 20 Jan 81 p 3

[Text] Agro-science research in Gansu Province has obtained heartening results from its steadfast facing up to production realities and the adoption of vigorous measures to promote the spread of scientific and technical achievements.

Use of results of small experiments to take in hand intermediate experiments for gradual expansion. The grasslands in Gansu Province total 205 million mu, which amounts to four times the area of cultivated land in the province. But a general deterioration of the grasslands has taken place, and a large number of livestock weaken and die every spring as a result. Consequently improvement in the range is a problem that begs for solution in the agricultural production of Gansu Province. In 1975 the Yongfeng pasture land in the Tianzhu Tibetan Autonomous County proceeded

from small experiments in improving the grasslands to intermediate experiments using cattle enclosures, irrigation, extermination of rodents, application of fertilizer, and elimination of toxic vegetation to increase the grass output of the natural range. They also used awnless bromegrass and laomangmai [5071 5345 7796], which are superior forage grasses, to establish perennial man-made ranges. Now this county has 570,000 mu of enclosed improved range, a spray irrigated grassland of 7000 mu, and 5000 mu of man-made grasslands. The Gansu Provincial Science Commission has promoted the results of the experiments at the Yongfeng pastureland, and now numerous ranges in pastoral areas are in process of being improved.

Insistence on combining experimental research with promotional demonstrations so that the fruits of research will be translated into productivity with all possible speed. In the process of promoting a new variety of fine wool sheep from the high mountains of Gansu, which had been bred to provide both wool and meat, experimental research was closely linked to promotion of the spread of the sheep. In addition to breeding 50,000 head of this new variety of sheep, another 370,000 head of fine wool cross-breed sheep were grown. A grant of 243,000 yuan was needed for this research, but as a result of this research, 1.6 million jin of superior quality wool valued at 2 million yuan was annually provided t the textile industry. Linze County planted sand stabilizing plants such as sacsaoul [Holoxylon ammodendron], hongliu [4767 2692], and haubang [5363 2761] on shifting sand dunes, and created a 31,900 mu windbreak and sand stabilizing shelter forest belt along 42 kilometers of windblown sand lines in the county, thereby creating a small "green Great Wall," not only to bring about changes in the ecology but also to bring wealth to the masses of commune members.

Agricultural Research, Development in Hebei

Beijing RENMIN RIBAO in Chinese 20 Jan 81 p 3

[Text] Ten counties in Hebei Province that have different natural conditions have used fairly sophisticated new techniques and new achievements to launch fairly large area experimental demonstrations by adapting general methods to specific situations for diversified crops such as cotton, corn, wheat, rice, and sweet potatoes, conducting research in multiple agricultural development problems, as a result of which output of grain and cotton crops in the experimental areas has greatly increased. On the more than 56,900 mu of cornfields in experimental areas located in nine counties including Qing, Ba, Gucheng, Xincheng and Weichang, yields show an average more than 130 jin per mu increase over control fields. The 14,840 mu of paddy rice fields in test areas in Funing and Zhuolu produced increases of 99 jin per mu over control fields. The 8,734 mu of cotton fields in Zhengding County produced an average 187 jin per mu of ginned cotton for a 31 jin per mu increase in yield over control fields.

The province, county, and communes invested a total of 180,000 yuan on these developmental research problems, and net increases in income as a result of the research translates into more than 3.2 million yuan, or the equivalent of an 18 fold increase in the amount invested. This also further demonstrated the applicability and reliability of scientific research results to find a way whereby science and technology can bring real economic benefits in the shortest possible time.

The agricultural leaders and scientific units in these 10 counties gave attention to good performance in the following ways: 1. Establishment of an organizational system for the close integration of administrative leadership and technical guidance; 2. adaptation of general methods to specific situations in the selection of problems, thereby interrelating research and production; 3. combining a system of responsibility in which production is linked to calculation of remuneration with a system of personal responsibility for each of the technicians to arouse the enthusiasm of all concerned; 4. emphasis on economic benefits; and 5. attention to overall development of agriculture, forestry, livestock raising, sideline occupations, and fisheries.

9432
CSO: 4007

RECKLESS FELLING OF TREES TO IMPROVE MOUNTAIN ECONOMY FORBIDDEN

Beijing RENMIN RIBAO in Chinese 17 Jan 81 p 2

[Article by Lu Peizhi [0491 1014 5347]: "Efforts to Revitalize the Economy of Mountain Areas Must Not Destroy the Forests: In the Enshi Prefecture, Some Commune Production Teams Who Have Illegally and Excessively Cut Down the Forests to Opportunistically Seek Illegal Profits, Must Be Dealt with Severely"]

[Text] A study of the countryside during the winter of last year discovered many mountain areas where in the name of "revitalizing the mountain regions' economy," forest resources were being destroyed, with sayings like "desiring a little earlier return, rush out to cut down trees," there appeared a scramble to cut. This in conjunction with timber poaching gave rise to conditions of lantern and torch cutting. Enshi Prefecture in Hubei annually grows only 500,000 cubic meters of timber. Since the winter before last, figures from five counties (there are eight counties in the whole prefecture) show that illegal cutting destroyed over 120,000 cubic meters of forest resources. In the Laifeng Tujia Autonomous County, which has the smallest forest area in the prefecture, last year's illegal cutting was 35,000 cubic meters, and yet this county's annual growth of timber is only 5,100 cubic meters. The Ganzi Brigade of the Jielong Commune in this county had completely cut down their trees within the space of two months, even those that were only as thick as a rice bowl. The personnel of merely one production team cut down over 10,000 trees.

There are some national organizations and departments who are taking advantage of the avarice of these mountain region commune members and have set up [offices] everywhere to negotiate purchases of timber. For a while, over 100 timber buyers from other places were resident in Laifeng. In the county seat, there were more than ten units and departments managing the timber. From January to August of last year, the county exported 1,211 cubic meters of timber. Everyday in this county's General Welfare Office [bai fu si], the non-forestry departments' trade in timber reached over 40 cubic meters, and they currently carry an inventory of over 3,000 cubic meters. Timber prices rise daily, for example on 16 October one cubic meter cost 85 yuan, on 17 October 90 yuan, and on 18 October it rose to over 100 yuan. On the highways, there is a continuous stream of people carrying timber, and on the rivers, timber floats in a solid line. At first glance, the forest economy truly seems to be "revitalized"; many commune members who have engaged in this illegal and excessive lumbering have purchased wrist watches, bicycles, and sewing machines and have bank accounts of several thousand yuan. But the ecological balance of nature has been severely disrupted; enriching one group has certainly impoverished others.

The illegal and excessive lumbering and the managerial chaos provide an opportunity of which some can take advantage. With their left hand they buy at low prices then with their right hand sell at high prices, thus making a big profit in an instant. In Xianfeng County, Lu Zikun [4151 1311 0981], the Vice Secretary of the party branch in the Fuyu Brigade of the Qingping Commune, bought two truckloads of fir and, shortly afterwards, sold them in Longshan County, Hunan, making over 2,000 yuan in a short time. By doing this kind of business, one could, at the very least, make 20 or 30,000 yuan in one year.

Because of this, it is suggested that each level of government should firmly enforce the law governing forests, recognizing the urgent notice issued by the State Council that forbade illegal and excessive lumbering, and at the same time, quickly implement a forestry policy that establishes a sound system of responsibility for the management of the mountains and forests, sets up a unified market for the purchase and sale of timber, and strictly deals with opportunistic elements.

9504
CSO: 4007

EFFECTS OF MERCURY ON RICE, RAPE INVESTIGATED

Beijing HUANJING KEXUE [ENVIRONMENTAL SCIENCE] in Chinese Vol 1 No 6, 30 Dec 80 pp 50-52, 13

[Article by Qu Aiquan [4234 1947 2938], Chinese Academy of Environmental Sciences, and Dong Huiru [2639 1920 1172] and Li Junguo [2621 0193 0948], Vegetable Research Laboratory, Chinese Academy of Agricultural Sciences: "A Preliminary Investigation of Mercury Effects on Rice and Rape"]

[Text] Mercury is the principal harmful substance in the industrial effluent of chemical, pharmaceutical, electroplating, and instrument plants, and it is a cumulative metallic poison. Mercury in waste water accumulates in the soil and in crops (including animal fodder) as a result of irrigation, finally going through the food chain to enter the human body where it causes great damage. By way of formulating farmland irrigation water quality criteria, and in order to provide definite scientific data on large area irrigation pollution, in both 1974 and 1975 we conducted experimental plantings in pots of paddy rice and rape.*

Materials and Methods

1. Experimental Methods

We used soil culturing in pots, the test crops provided being paddy rice (Jingyue No 1) and rape (Wuyueman). The soil in the pots was sandy; the pots were filled according to weight, and watering was done according to volume.

2. Handling of the Experiment

(1) Effect of mercury on paddy rice and rape (calculated at a HG^{+2} concentration in the $HgCl_2$) in the water used for watering.

a. Treatment concentrations in 1974: 0, 0.025, 0.25, 2.5, 25, and 50 milligrams per liter.

b. Treatment concentrations in 1975: 0, 0.005, 0.01, 0.1, 0.5, and 2.5 milligrams per liter.

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*Experiments were conducted at the Beijing Municipal Institute of Agriculture

Throughout the period of growth, watering was done with water containing mercury at each of the above treatment concentrations.

(2) Effects of mercury in the soil on paddy rice and rape.

During 1975, paddy rice and rape were grown separately in the soil in the experimental pots that had been watered in 1974 with mercury solutions of different concentrations, and watering was done with clear water throughout the growing season. Each treatment was repeated four times. Monitoring of the residual quantity of mercury in agricultural products and in the soil was done by the vanadium pentaoxide method and the 590 type mercury testing device.

Results and Analysis.

Effects on growth and output of paddy rice and rape of mercury in watering water and its persistence and accumulation in plants and in the soil.

(1) Effects of different concentrations of mercury on the growth and output of rice and rape.

It may be seen from Table 1 on the experiments with rice and Table 2 on the experiments with rape that there were no adverse effects either on growth or output from a mercury solution of below 0.25 milligrams per liter used for watering. When a 2.4 milligrams per liter mercury solution was used to water the rice, it had an inhibiting effect on the growth of the rice, obstructing growth. Output declined. At this concentration, the live weight of individual rape plants fell by 12.3 percent over the control plants.

Rice output is determined by a combination of factors including the effective number of panicles, the number of grains per panicle, and the weight per thousand grains. It is apparent from Table 1 that the principal reason output for paddy rice impairment by the 2.5 milligrams per liter mercury solution as compared with the control was a 27.8 percent decline in the number of grains per panicle, a 1.05 gram reduction in the weight per thousand grains, and an increase in the number of empty husks. This demonstrates that mercury's impairment of growth was rather more serious during the differentiation of the heads, and impairment also occurred when the rice was in the milk stage. As concentrations were increased in the treatments, impairment to all of the elements that go into rice output increased. Rice treated with 25 milligrams of mercury per liter of water showed a 20.6 percent decline in the number of effective panicles on each plant; the number of grains per panicle fell by 46.7 percent, and there were 2.2 times more empty husks than in the controls. Treated with 50 milligrams per liter, no heads formed on tillers but only on the main stem. Number of grains per panicle fell by 70.8 percent as compared with the control, and the number of empty husks dramatically increased 5.4 times over the controls. Each plant had only 0.2 grams of output.

Table 1. Impairment Caused to the Factors in Paddy Rice Output by Different Concentrations of Mercury

Items checked / Treatment concentration (mg/liter)	Plant height (cms)	Effective No. of panicles (panicles per plant)	No. of grains per panicle (grains)	Empty husks (grains per panicle)	Per 1000 weight of grain	Output (grams per plant)	Reduction in output (percent)
0	103.2	6.8	103.8	2.1	25.20	14.5	--
0.025	107.1	6.8	98.2	4.1	24.95	15.6	--
0.25	109.2	7.2	99.3	4.0	24.30	16.1	--
2.5	90.5	6.5	74.9	4.1	24.15	11.4	21.4
25	70.0	5.4	55.3	4.7	24.40	7.1	51.0
50	52.3	1.0	30.3	11.4	21.80	0.2	98.6

Table 2. Effects on the Growth of Rape of Different Mercury Concentrations

Date / Items checked / Concentration of treatment	23 May 1975 Maximum leaf length (cms)	Maximum leaf width (cms)	Live weight (grams/plant)
0	19.7	8.3	30.9
0.005	20.2	7.9	31.1
0.01	20.2	8.0	30.0
0.1	20.3	7.8	29.5
0.5	20.4	8.6	29.6
2.5	19.4	8.2	27.1

(2) Residual quantities of different concentrations of mercury in unpolished rice and in rape.

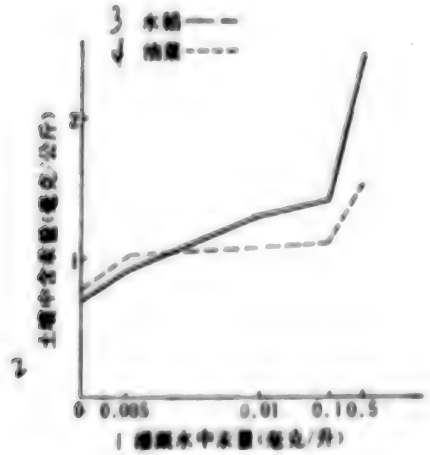
The residual rate for mercury in unpolished rice and in rape was calculated from the residual quantity of mercury in unpolished rice and in rape from the infusion of a quantity of mercury by watering throughout the growth period in experiments with potted plants. The residual amount of mercury in the crops

increased according to the increase in mercury concentrations in the water used for watering. The residual rate in rape of different concentrations of mercury was roughly the same. This demonstrates that the rape absorbed mercury in virtually the same proportions, while the residual rate in the unpolished rice formed a negative relationship with the concentration in the water used for watering, i.e. the greater the concentration of mercury in the water, the lower the proportion entering the unpolished rice. In addition, the residual quantity of mercury bore a relationship to the kind of crop and to the amount of watering. If the treatment concentration was 0.1 milligrams per liter, the residual quantity of mercury in the unpolished rice was 0.28 milligrams per kilogram, and 0.14 milligrams per kilogram in the rape. This was because of the biological characteristics and the large quantity of water needed by the paddy rice. Throughout the growing period, a fixed water level was maintained for the paddy rice, which helped the roots of the rice absorb mercury from the solution in the soil.

When the rice was watered with 0.01 milligrams of mercury per liter, the mercury content of the unpolished rice exceeded China's national standards of "Permitted Amounts of Mercury in Foodstuffs" of 0.02 milligrams per kilogram. After the rice was harvested, the roots, stems, leaves, husks and unpolished rice were checked for mercury content in plants that had been watered with water containing different concentrations of mercury. Per unit quantity of mercury in descending order was roots-stems-leaves-husks-unpolished rice. Quantity of mercury in the roots was 59.22 percent that in the entire plant. Quantity in the leaves was 31.28 percent, in the husks 5.02 percent, and in the unpolished rice 4.46 percent.

(3) Accumulation of mercury in the soil from watering of rice and rape.

After the rice and the rape were harvested, analysis was made of 0-20 grams of the potting soil. Concentrations of mercury in the soil increased as concentration of mercury in the watering water increased (see Figure 1). Even in the case of the water that contained only 0.005 milligrams of mercury per liter, after long watering the top layer of the soil still showed accumulation of mercury. Given the same treatment, the residual mercury in the soil in which the rice was grown was greater than in the soil in which the rape was grown, mainly for the reason that the volume of watering of the rice was greater.



Key:
1. Quantity of mercury in the water used for watering (milligrams per liter)
2. Quantity of mercury in soil (milligrams per kilogram)
3. Paddy rice
4. Rape

Figure 1. Accumulation of Mercury Water Used for Watering in the Pot Soil

When the soil was divided into layers from 0-5 centimeters deep and from 5-20 centimeters deep and tests made for quantity of mercury, results showed that the mercury was concentrated mainly in the top 0-5 centimeter surface of the soil. In the case of treatment of paddy rice with a concentration of 2.5 milligrams of mercury per liter, the 0-5 centimeter deep top layer of soil in the pots showed 7.9 times as much mercury as the control, while below a depth of 5 centimeters, the increase was only 1.9 times. This shows that the mercury that enters the soil is adsorbed by the soil, but that it does not easily migrate.

2. Effects of mercury in the soil on growth and output of paddy rice, and its persistence in plants.

(1) Effects of different concentrations of mercury in the soil on the growth and output of paddy rice and rape.

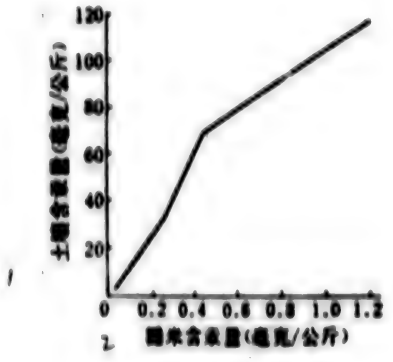
Table 3 shows that when the quantity of mercury in the soil is less than 4.69 milligrams per kilogram, there is no noticeable effect on rice output. As the quantity of mercury in the soil continues to increase, the effect on growth and output of rice gradually increases. This differs from the results obtained in 1974 when a 2.5 milligram per liter solution of mercury in water was used to water rape and resulted in a decrease in rape output, demonstrating that the damage caused in rape is greater from mercury in the water used for watering than from mercury in the soil. Possibly this has something to do with the smaller quantity of water used for the dryland crop rape than for paddy rice, with the result that the amount of mercury adsorbed into the soil in 1974 went less into solution in 1975, thereby reducing the damage to the growth of the rape. This shows that soil has a certain ability to purify itself of toxic substances, thereby reducing the toxicity of crops.

(2) Persistence in unpolished rice and rape from different concentrations of mercury in the soil.

Although the damage done to growth of rape from different concentrations of mercury in the soil was less than the damage done from mercury in the water used for watering, there are limits to the ability of the soil to cleanse itself of toxic substances, therefore not all of the mercury in the soil was adsorbed by the soil; a portion of the mercury persisted in the rape. There was a direct relationship between the residual amount in the rape and the accumulation of mercury in the soil, and the quantity of mercury in the unpolished rice there was also a direct relationship with the quantity of mercury in the soil (see Figure 2).

Table 3. Effects of Mercury in the Soil on the Growth of Paddy Rice and Rape

Mercury concentration in 1974 waterings (mg/liter)	Paddy rice			Rape			
	Quantity of mercury in soil in 1975 before planting (mg/liter)	Plant height (cms)	Output (grams per plant)	Quantity of mercury in soil in 1975 before sowing (mg/liter)	Maximum leaf length (cms)	Maximum leaf width (cms)	Live weight (grams/plant)
0	1.41	113.8	16.3	1.16	20.7	8.0	30.5
0.025	1.80	109.6	14.6	1.28	20.8	7.8	35.7
0.25	4.69	109.1	16.0	1.54	20.3	7.5	33.7
2.5	33.44	112.2	13.7	5.96	21.3	8.0	33.5
25	69.89	101.4	11.1	9.38	21.0	7.7	35.0
50	118.83	91.6	6.0	17.73	20.4	7.8	30.8



Key:

1. Mercury content of soil (mgs/kilos)
2. Mercury content of unpolished rice (mgs/kilos)

Figure 2. Relationship Between Mercury in Soil and Mercury Content of Unpolished Rice

Brief Summary

1. Mercury content of below 0.25 milligrams per liter show no apparent effect on the growth or output of paddy rice, and a mercury content of 0.5 milligrams per liter shows no noticeable effect on the growth of rape. Mercury content of 2.5 milligrams per liter begins to show an inhibiting affect on the growth of both paddy rice and rape.

2. Residual quantities of mercury in unpolished rice and rape increase as the concentration of mercury in the water used for watering increases. Distribution of mercury in the various organs of paddy rice in descending order is roots-stalks and leaves-husks-unpolished rice.

3. The mercury content of the soil increases as the concentration of mercury in the water used for watering increases. The mercury that enters the soil from the water used for watering concentrates principally in the top 0-5 centimeters of the soil. Water used for watering with a mercury content of 0.005 millimeters per liter, even though it accumulates only in the top layer of the soil, will eventually pollute the soil creating damage to the crops.

4. Agricultural crops are able to absorb mercury from polluted soil, and the mercury content of crops is directly related to the accumulation of mercury in the soil.

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9432
CSO: 5000

PARATHION RESIDUE, ITS METABOLITE PARAOXON ANALYZED

Beijing HUANJING KEXUE [ENVIRONMENTAL SCIENCE] in Chinese Vol 1 No 6, 30 Dec 80 pp 5-9

[Article by Zhou Zhenhui [0719 2182 1920] and Pan Guangming [3382 0342 2494], Shanghai Insect Institute, Chinese Academy of Sciences: "Determination of Parathion Residue and Its Metabolite Paraoxon"]

[Text] Analysis of residual quantities of organic phosphorous and carbamete type of pesticides and of metabolites or enzyme inhibitors using the thin-layer chromatography-enzyme inhibition method (abbreviated as TLC-EI) detected nanogram (10^{-9}) or even pico (10^{-12}) quantities.

The principles and applications of this method have been exhaustively reported,[1-8] but as yet no reports have appeared inside China or abroad of the use of the quantitative method using zigzag scanners directly on enzyme inhibiting pesticide spots on thin layer plates.

We used dual wave-length chromatographic scanners to scan the quantity of residual 1605 [parathion] pesticides and their enzyme inhibitor metabolite, paraoxon in unpolished rice and rice chaff. Detection limit was 10^{-10} grams; degree of accuracy of quantities was <5 percent; degree of precision of quantity by repeated scanning of spots was <0.3 percent. Exploration was also made of the dual wave-length selection of the enzyme inhibitor spots and the linear parameter set-up according to the Kubelke-Munk formula.

Experimental Method

I. Reagents and Equipment

1. Thin layer chromatographic plate. To 50 grams of silica gel G (E. Merck) add 100 milliliters of distilled water and using a Stahl applicator spread it on a 20 x 20 centimeter thin layer plate to a thickness of 0.5 millimeters. After drying it for 5 minutes at room temperature, heat at 110°C to activate for 1 hour and store in a desiccator for use.

2. Spreader: n-hexane; acetic ethyl ester (3:1).

3. Preparation of enzyme solution: Homogenize the liver of a small white mouse in distilled water in an homogenizer, and then place in a centrifuge for 15 minutes at a speed of 4500 revolutions per second. Pour off the clear liquid into a container and store in refrigerator for use. The ratio of mouse liver to distilled water is 1:30 (W/V).

4. Substrate

(1) Weigh out 5.4 milligrams of β-naphthylacetic ester and dissolve in 4 milliliters of anhydrous ethanol.

(2) Dissolve 20 milligrams of colorfast blue B in 16 milliliters of distilled water.

Just before using, mix (1) with (2).

5. Standard solution of pesticide: Use acetone to make a solution of 1605 (prepared by the Shanghai Institute of Entomology at a purity of 98 percent) and paraoxon (made by the West German Pestanal Company, purity 99 percent) of 1.6, 3.2, 4.8, and 6.4 milligrams/100 milliliters. Next, take 1 milliliter of each of the above solutions and dilute them to a fixed volume in a 10 milliliter container. Thus, each of the standard solutions will contain 1.6, 3.2, 4.8, and 6.4 millimicrograms/microliters of 1605 and paraoxon pesticides.

6. Instrument: Shimazu dual wavelength thin layer chromographic scanner, Type CS-900 with Chromatopac E1A microprocessor.

II. Steps in Analysis

1. Extraction

Grind the unpolished rice sample into rice flour and put through a 40 mesh sieve. Then place 25 grams in a Soxhlet extractor and use 80 milliliters of acetone in continuous flow to extract for 6 hours; then measure into a 25 milliliter volumetric flask.

If a rice chaff specimen is used, place 5 grams in the Soxhlet extractor, and use 80 milliliters of acetone in continuous flow to extract for 6 hours, measuring into a 25 milliliter volumetric flask.

2. Thin layer chromatographic separation--enzyme inhibitor

Using a 10 microliter microinjector, dot the thin layer plate with 10-20 microliters of unpolished rice extract. Each thin layer plate may be dotted with 4-6 specimens and a series of 3-5 standard solutions of pesticides of different concentrations. After dotting has been completed, spread 10 centimeters in the spreader (this will require about 25 minutes). Take out the thin spreading plate, and wait until the solvent has completely evaporated; then spray with 15 milliliters of a 3 percent aqueous bromine solution and heat in a 50°C oven for 10 minutes to get rid of the excess bromine. Next spray with 30 milliliters

of enzyme solution and after the thin layer plate has been kept at 30°C for 30 minutes, lightly spray it with 20 milliliters of the mixed substrate solution i.e., until the violet background color shows colorless spots of the pesticide enzyme inhibitor (after having been developed it is completely stable, and it may be kept for more than half a month). The R_f value of 1605 is 0.70; the R_f value of paraoxon is 0.25.

3. Quantitative Scanning

Place the thin layer plate in the scanner and do an absorption spectrum scan using the dual wavelength zigzag line reflection method. Scanning conditions are as follows:

Specimen wavelength (λ_S): 420 nm
Reference wavelength (λ_R): 530 nm
Linear parameter (S_X): 10
Slit: 1.25 X 1.25 mm
Scanning speed: 10 mm per minute
Recorder sensitivity: X1
Speed of recording paper: 10 mm per minute

Both the analytic parameters and the calculated parameters of the ElA microprocessor were run by the group set method. The quantitative calculation method used the extrapolated method. While recording scanning peaks for recorded spots on the recording paper at the time of scanning, the microprocessor directly printed out the content of the specimen, expressing it in nanogram units.

Conclusion and Discussion

1. Selection of Wavelength

The scanning wavelengths for enzyme inhibitor spots in pesticides have not been encountered in literature as of this time. Since the background color of the thin layer plate is violet while the pesticides are colorless, the absorption peaks obtained by using the normal position is a negative peak and the absorption spectrum is as shown in Figure 1. A negative peak signal cannot be inputted to a linear device. In order to be able to input the absorption peak signal into the linear device to carry out correction of the Kubelka-Munk formula, we used a method opposite to the ordinary one for selecting an ordinary wavelength, namely for the specimen wavelength (λ_S) selection of the smallest absorption wavelength, and for the reference wavelength (λ_R) selection of the largest absorption wavelength. In order to bring the light paths into balance, this experiment used λ_S as 420 nm; and λ_R as 530 nm, and more than 50 experiments confirmed the selection of the two wavelengths mentioned above to be correct.

2. Increasing the Recovery Rate

After removing the hulls from 5 kilograms of paddy rice to get unpolished rice, and then grinding this into rice flour in a grinding machine, it was put through a 40 mesh sieve and sifted. It was then divided into 25 gram portions of unpolished rice flour (to make a total of 16 portions, divided into 4 groups). Each was placed in a 250 milliliter beaker, with one of the 4 groups being used

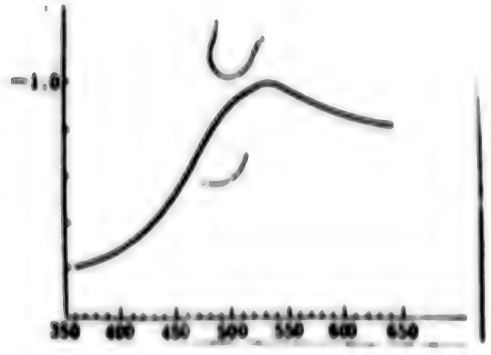

Figure 1. Thin Layer Chromatogram--Normal Position Scanning Absorption Spectrum Graph for Pesticide Enzyme Inhibitor Spots in Enzyme Inhibiting Methods. Absorbant: silica gel G (E. Merck)

as a blank control. Each of the remaining 3 were placed in 15 milliliters of 1605 pesticide and standard paraoxon solution (the standard solution for the first group had a strength of 2.50 milligrams/15 milliliters of 1605 and paraoxon for each portion), each portion in the second group had a content of 12.5 milligrams/15 milliliters of 1605 and paraoxon. In the third group, each portion contained 25.0 milligrams/15 milliliters of 1605 and paraoxon. The immersed unpolished rice specimens were kept at room temperature for 15 hours, and after the pesticide had slowly penetrated the specimens and had volatilized, it was placed in the Soxhlet extractor and 80 milliliters of acetone was circulated through the extractor for 6 hours and volumetrically quantified in a 25 milliliter volumetric flask.

The increased rate of recovery in this experiment went from 0.1 - 1.0 ppm. The recovery rate for the paraoxon was 70.2 - 109.1 percent for an average recovery rate of 89.05 percent. In addition in the control using gaseous phase chromatography, the recovery rate was 82.3 - 100.7 percent for an average recovery rate of 90.5 percent. Because of the excessive disturbance to the specimen group at 0.1 ppm in the gaseous phase chromatography, a control was run only on 0.5 and 1.0 ppm. For results of the increased recovery rate for paraoxon see Table 1.

The increased recovery rate for 1605 was 91.79 - 105.40 percent, for an average recovery rate of 98.03 percent. The gaseous phase chromatography method showed a recovery rate of 96.3 - 128.3 percent for an average recovery rate of 110.50 percent. Increased recovery rates for 1605 are shown in Table 2.

From Tables 1 and 2 it may be seen that the results from the thin layer chromatography--enzyme inhibitor scanning method to determine quantity--are identical with the experimental results of the gaseous phase chromatography method.

Specimen No.	Added concentration	Volume spotted on specimen (μl)	Equivalent to additional pesticide volume (ng)	Amount recovered (ng)	Recovery rate (percent)	Gaseous phase chromatography recovery rate (percent)
1.1	1	10	10	10.912	109.1	86.3
1.2		10	10	9.7[illegible]	97.3	84.0
1.3		10	10	10.301	103.0	84.0
1.4		10	10	9.825	98.25	84.0
2.1	0.5	20	10	9.555	95.6	100.7
2.2		20	10	7.017	70.2	82.3
2.3		20	10	7.791	77.9	96.5
2.4		20	10	7.174	77.7	93.4
3.1	0.1	20	2	1.982	99.1	
3.2		20	2	1.514	75.7	
3.3		20	2	1.605	80.25	
3.4		20	2	1.689	84.45	
4.1	CK	20	0	0		
4.2		20	0	0		
4.3		20	0	0		
4.4		20	0	0		
average recovery rate					89.05	90.50

Specimen No.	Increased concentration (PPm)	Volume spotted on specimen (μl)	Equivalent to added pesticide volume (ng)	Volume recovered (ng)	Recovery rate (percent)	Gaseous phase chromatographic method recovery rate (percent)
1.1	1	10	10	9.179	91.79	96.1
1.2		10	10	9.263	92.63	100.0
1.3		10	10	9.347	93.47	102.7
1.4		10	10	9.600	96.0	105.0
2.1	0.5	10	5	4.924	98.48	116.7
2.2		10	5	5.252	105.4	128.3
2.3		10	5	5.252	105.4	118.4
2.4		10	5	5.09	101.80	115.6
4.1	CK	10	0			
4.2		10	0			
4.3		10	0			
4.4		10	0			
average recovery rate					98.03	110.50

Linear Parameters

Inasmuch as the medium is a nontransparent adsorbent, at the time of scanning to determine amounts by the thin layer chromatographic reflecting method, it was not consistent with Beer's law. Therefore, the concentration of the material and the degree of absorption of light do not present a simple linear relationship, and only after using the Kubelka-Munk formula to find the linear parameters of the thin layer can good linearity be presented between the concentration of the material and its integral value. The writers used 3.2 - 12.8 millimicrograms of a series of different concentrations of standard samples of paraoxon to make an S_x 3 - 10 linear relationship graph (see Figure 2).

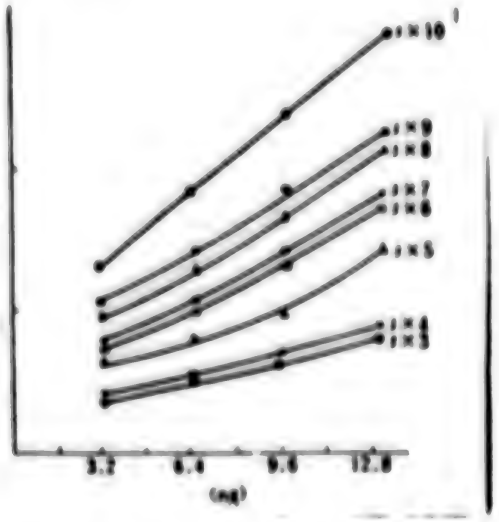

Figure 2. Linear Parameter Graph of Paraoxon Pesticide Enzyme Inhibitor Spots

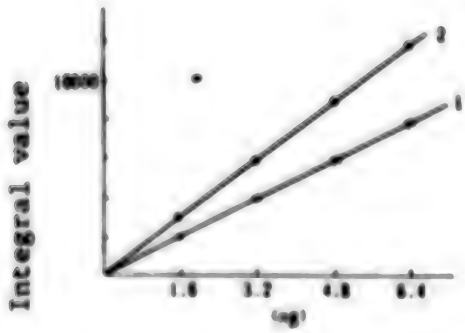

Figure 3. Working Curve for Pesticide Enzyme Inhibitor Spots. 1.1605. 2.Paraoxon

From Figure 2 it may clearly be seen that when the thin layer plate was used in the linear parameter $S_x = 10$, not only were the linear relationships good, but the degree of sensitivity derived was also very high. Therefore the linear parameter (S_x) used in this method was 10.

The experiment demonstrated that when the 1605 and the paraoxon pesticide enzyme inhibitor spot was below 6.4 millimicrograms, the working curve was a straight line that went through the original point. (Figure 3); however, when the material was fairly thick or when the developed thin layer plate was put aside for half a month or more before being measured, the working curve did not go through the original point even though it still presented a good linearity. This phenomena accords with the results reported by Yamamoto Yushi [1472 2609 5940 1807].

Because of the difficulty in spraying a uniform amount of enzyme liquid and substrate solution on each piece of thin layer plate, we additionally spotted 3 or 4 standard samples of different concentration on each piece of thin layer plate, so in making the working curve for each thin layer plate, the degree of standardization of fixed amount is <5 percent.

The degree of sensitivity derived by this method is as high as 10^{-10} grams (<0.5 nanograms); therefore the volume spotted on the specimen was very little, generally only 10 - 20 milligrams being required. Thus, the extract from the specimens could not be purified, and 0.05 ppm of paraoxon and 0.1 ppm of 1605 pesticide remnants were directly measured on the thin layer plate (in Japan, the permissible quantity of residue in various crops is 0.3 ppm).

Verification of the Analysis and Methods of the Environmental Samples

All the environmental specimens consisted of 12 items selected from the medium maturing rice crop harvested in October 1979 in Chongming and Jiading counties in Shanghai, and unpolished rice and rice chaff from each of these 12 items were directly measured for 1605 and for paraoxon without any purification of them. Results of measurements of the chaff specimens are detailed in Table 3.

Table 3. Results of Measuring Rice Chaff Specimens From Chongming and Jiading Counties in Shanghai, 1979

Specimen Number	Amount spotted on specimen (microliters)	Equivalent to specimen amount for rice chaff (milligrams)	Measured amount (millimicrograms)	
			1605	Paraoxon
1	30	6	--	--
2	30	6	--	--
3	30	6	--	--
4	30	6	--	--
5	30	6	--	--
6	30	6	0.184	2.097
7	30	6	0.576	2.160
8	30	6	0.466	1.933
9	30	6	0.605	0.718
10	30	6	0.711	1.426
11	30	6	0.559	1.557
12	30	6	--	--

In order to verify methods, the paraoxon in specimens numbers 6-11 was measured with the CS-910 scanners in the Shanghai Institute of Pesticides and in the Qingdao Academy of Medicine [sic]. Results are shown in Table 4.

Table 4. Result of Measurement in Rice Chaff Specimens in CS-900 and CS-910 Scanners

Specimen Number	Results of test in CS-900 at Shanghai Insect Institute [sic] (millimicrograms	Results of tests in CS-910 at Shanghai Academy of Medicine (millimicrograms	Absolute error
6	2.097	2.057	0.040
7	2.160	2.590	0.430
8	1.933	1.830	0.103
9	0.718	1.049	0.331
10	1.426	1.333	0.093
11	1.557	1.226	0.331

Table 4 shows that as a result of the use of two different types of thin layer chromatograph scanners at two different units, test results for paraoxon on individual specimens were the same.

This method of verification had the participation of Comrade Ma Yicai [7456 0110 2088] of the Shanghai Institute of Pesticides and of Comrade Ding Yufang [0002 3768 5364] of the Qingdao Medical College. The gaseous phase chromatograph data was verified by Comrade Chen Xiangda [7115 0686 6671], and Comrade Wang Huiju [3769 6540 5468] participated in some of the work. Thanks are tendered to all.

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BRIEFS

NATIONAL ROSIN CONFERENCE--The National Rosin Production Conference was held in Hangzhou, Zhejiang, on 5 March to sum up and exchange experience in rosin production and study ways to make full use of rosin resources, tap the potential of the existing rosin enterprises so as to greatly increase rosin output and furnish sufficient raw materials for the manufacture of light industrial products such as paper, soap, ink and paint. More than 180 representatives and leading members of rosin research and production units from 16 provinces attended the conference. Comrade (Chen Changwu), vice minister of agriculture [as heard], addressed the conference. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 8 Mar 81]

AGRICULTURAL NEWS BRIEFS--Beijing, 26 Feb (XINHUA)--A young Chinese peasant has developed a summer wheat after 12-generation experiments over a 5-year period, according to the Shanxi Provincial Agricultural Department. Planted in mid-July, the wheat was harvested in mid-October. Three years of experimental growing at an altitude of 1,000 meters in the rolling hills of Yuci County, Shanxi Province, resulted in a summer wheat yield that was 10 percent higher than the local winter wheat yield, the department reported. Agronomists in subtropical Bobai County, Guangxi Zhuang autonomous region, have successfully introduced the tropical pepper plant, a condiment. Of 250,000 pepper plants, 90,000 plants have begun to bear fruit, the Guangxi Zhuang Agricultural Department reported. Last year, 70 tons of peppers were harvested. [Text] [OW271637 Beijing XINHUA in English 0154 GMT 26 Feb 81 OW]

CSO: 4020

BRIEFS

DROUGHT CONFERENCE--On the afternoon of 2 March, the relevant departments of the Beijing Municipal People's Government held an emergency work conference on spring farming. The participants urged the people in the countryside to do a good job of spring farming. They pointed out that after spring festival, due to the effects of the cold and drought, progress of spring sowing and tending of spring crops in the countryside was slower than the previous year. By 2 March, the areas sown with early spring crops this year throughout the countryside were 9,000 mu less than the corresponding period of last year. All the counties, districts, communes and brigades must urgently get mobilized, overcome difficulties and do a good job of spring farming by taking combating drought as the central task. While the agricultural science and technology personnel must strive to be good staff officers. [Beijing City Service in Mandarin 2300 GMT 2 Mar 81]

CSO: 4007

PROSPECTS FOR NEW SUGARCANE CRUSHING SEASON CALLED BRIGHT

Fuzhou FUJIAN RIBAO in Chinese 2 Jan 81 p 1

[Article by the Newspaper's Correspondent from Wang Shengxuan [3769 4141 1357], Provincial Sugar Refinery; "1980-1981 Sugarcane Crushing Season Fully Underway in Fujian; Cane Growing Area in Province Increased by 30,000 Mu Over 1979 and Total Sugarcane Output to Exceed 3 Million Tons; Daily Sugarcane Crushing Capacity Increased by 2500 Tons; Numerous Refineries Maintain 100 Percent Standards"]

[Text] During December 1980, sugar refineries large and small throughout the major sugarcane producing areas of Putian, Jinjiang, Longxi, and Xiamen began crushing to launch the 1980-1981 sugarcane crushing season.

In 1980, every area continued to carry out the policy of "sugarcane and grain linkage." The province's sugarcane growing area of 648,000 mu increased by 30,000 mu over 1979, and total output will exceed 3 million tons. Great increases in crushing capacity have taken place everywhere. In addition to the new construction of three sugar refineries that can crush 500 tons of sugarcane a day, daily crushing capacity of old refineries has been increased by 1,000 tons through use of formerly unused potential, reforms, and improvements. The daily crushing capacity of the Zhangzhou Refinery increased from 2,800 tons to 3,100 tons. The daily crushing capacity of the Putian Sugar Refinery increased to more than 2,450 tons. Production capacity of the Fuqing and Zhaoan sugar refineries increased by about 13 percent.

During the 1980-1981 crushing season, each refinery worked according to the principle of "quality sugar and quality pressing." The pressing season began later than last year and was shorter in duration, placing greater demands on the capacity of the equipment. Before crushing began, each sugar refinery took a page from the books of running water operations and synthetic chemical production to arouse the masses to check for hidden troubles, seek out problems, and diligently check and fix equipment. After each crushing session, attention was given to safeguarding the equipment, making sure of its safe operation, and a proper supply of materials, water, steam, and electricity. The perfection rate for equipment at the Zhangzhou Sugar Refinery was better than 95 percent, and at the Fuqing Sugar Refinery and the Shanyou Sugar Refinery, the equipment safe operation rate was a cumulative better than 99 percent since the beginning of crushing. Since the beginning of the new crushing season, quite a number of refineries have maintained a 100 percent record in meeting specifications for refined granulated sugar. The first vat after crushing began at the Zhangzhou Sugar Refinery was first grade sugar, and the second vat improved to superior grade. As of now, this plant has a 91.8 percent superior grade rate.

During this crushing season, each jurisdiction adhered to the principle of "mechanized refining first, following by semi-mechanized refining; and large refineries first followed by small refineries" in an effort to produce more and better sugar. The Shangzhou Sugar Refinery summarized the experiences of the year before last. Last year it continued to sign contracts with five small sugar refineries nearby for their crushing of 61,700 tons of sugarcane, which converts to 293 tons of white sugar more than the small refineries could have crushed themselves for an increase of 2.1 million yuan in taxes and profits. The major sugarcane producing counties of Xianyou and Putian also convened tri-level cadre meetings on sugarcane production to deploy for implementation of specific measures for "a bumper sugarcane crop and increased sugar output." Daily, communes and brigades in the Zhangzhou Sugar Refinery sugarcane area massed more than 100 tractors to work with the railroads to transport cane to the refineries.

Every sugar refinery also intensified management to increase economic effectiveness. The Fuqing Sugar Refinery instituted an "intermural handling method" whereby the farm transportation, crushing, refining, and power workshops, and the supply and marketing and administrative offices independently formed production, supply and marketing operational management links, each with its own accounting system. The Xianyou, Zhangzhou, Xiamen, and Dufeng refineries used a method whereby the refineries signed contracts with workshops including "fixeds, guaranteeds, and rewards" to promote employee participation in management. Each plant also set up a unit for conservation of energy and established an energy conservation watch network and points. The Zhangzhou Sugar Refinery is a large consumer of coal, which annually consumes between 60,000 and 80,000 tons of raw coal. Since crushing began, this plant strove to increase the efficiency of its boiler and power generation units, reduce the use of steam in production, and recover hot water, thereby reducing steam consumption per ton of sugar cane by four percent of plan, and reducing by 5.9 percent consumption of standard coal for a 1.2 percent decrease over the same period last year. During the first mini-period, 650 tons of coal were conserved.

9432
CSO: 4007

YONGDING COUNTY HAS BUMPER TOBACCO, GRAIN HARVEST

Fuzhou FUJIAN RIBAO in Chinese 4 Jan 81 p 1

[Article by Lu Fuchao [4151 1381 6389], Xu Nofu [6079 6179 1133], and Qian Jainqin [6929 1696 0530]: "Yongding Had Bumper Harvests of Grain and Tobacco Last Year; Stable Grain Field Area; Expansion in Growing of Flue-Cured Tobacco"]

[Text] Yongding County, the renowned flue-cured tobacco production area of Fujian Province last year guaranteed an increase in grain output from a fixed grain field area and also tapped unused soil potential to expand growing of flue-cured tobacco, reaping bumper harvests in both grain and tobacco.

Flue-cured tobacco from Yongding County is a major raw material for the production of high grade cigarettes. Last fall the state formally decided to build a 30,000 mu flue-cured tobacco base in Yongding County that would rank foremost among the country's 10 fine quality tobacco bases. In order to make sure that flue-cured tobacco production quotas would be fulfilled without any impairment to grain output, the County CCP Committee acted in accordance with the spirit of accentuating positives and avoiding negatives to make the most of advantages, readjusting the grain and tobacco growing areas in accordance with realities. They took action to: 1. change single crop rice fields to fields for the growing of one crop of tobacco and one crop of rice to grow another season of flue-cured tobacco. 2. They used late crop rice seedling fields to grow a crop of tobacco in advance. 3. In the Gaopi and Kanshi communes, where flue-cured production is fairly concentrated, tobacco was moved to moderately productive fields for rotational cropping while high output fields were used for the growing of grain. Following these readjustments, the area sown to grain throughout the province last year was basically stabilized at 570,000 mu. Grain output for the province totaled more than 210 million jin for an increase in output over last year of more than 12 million jin. Output of tobacco was 6.5 million jin of which more than 5.5 million jin was sold to the state in a 30 percent overfulfillment of the state plan, and for a more than doubling of the year before last. From the flue-cured tobacco alone, average per capita earnings throughout the county were about 20 yuan, and more than 40 yuan in major tobacco growing areas. Last year, the growing of more than 6600 mu of tobacco was promoted on single crop rice fields throughout the county, and the harvesting of high quality tobacco from these fields was proportionately higher than from the old tobacco growing areas. Output from the single crop of rice grown after the tobacco was harvested was also from 10 to 20 percent higher than from the fields where no tobacco had been grown. Use of late crop seedling fields for the growing of tobacco also produced outputs that were higher than from the continuous growing of rice.

What with the increased grain output and the bumper tobacco harvest and awards of grain and fertilizer when the tobacco was sold, the masses had both grain and money in their hands and were happy. They said that with such well led and well planned readjustments to the crop pattern, everything was taken into consideration with nothing being forgotten and real bumper harvests in grain and tobacco were achieved for increases in both grain and cash.

Most recently the Yongding County CCP Committee summarized the experiences of the past year, deciding on further readjustment in the internal composition of agriculture so as to maintain a continuation of increased grain output this year, and to achieve greater development of tobacco. This year they plan to keep stable the area sown to grain, and concentrate their attack on an increase in per unit yields. Tobacco will be increased to 66,000 mu for a total output that breaks the 10 million jin mark. The methods to be used will be continued tapping of unused soil potential, use of half the moderate yield rice fields for the rowing of a crop of tobacco, use of all the late crop rice seedling fields, and arrangements for the growing of early spring tobacco in old tobacco growing areas with high rice output, with the planting of early ripening early rice after the tobacco has been harvested. They plan to use other methods as well, including encouragement to commune members to use their private plots for the growing of tobacco in a multi-pronged effort to carry out plans for an expansion of tobacco.

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CSO: 4007

GROWING DUCKWEED FOR FERTILIZER STRESSED

Fuzhou FUJIAN RIBAO in Chinese 6 Jan 81 p 1

[Text] Last year saw great development in the growing of duckweed in paddy fields in Fujian Province, particularly in the growing of fine duckweed [xiluping 4798 4845 5493], the development of which was most rapid. Looked at in terms of its propagation and use in the three counties and municipalities of Tongan, Quanzhou, and Minhou on which this newspaper reported today, fine duckweed possesses truly strong resistance to cold, multiplies in low temperatures, and grows and multiplies rapidly to produce a high output of fresh duckweed. When fine duckweed is used to fertilize fields, a general increase in yields of paddy rice of between 70 and 80 or up to 100 jin per mu are possible for an increase of about 10 percent as compared with fields in which no duckweed has been grown, and soil quality is improved as well. From this may be seen that in order to get a bumper agricultural harvest this year, action to grow duckweed in paddy fields is essential.

Everyone in the rural villages knows the old saying, "If the crops you would assure, never stint on the manure." But views differ greatly as to the kinds of manure. With the development of industry during the past 10 years, the supply of chemical fertilizer in Fujian Province has multiplied, and some comrades imagine that if you have chemical fertilizer, organic fertilizer is not important. This is an extremely damaging notion. Scientific studies have shown that between 50 and 70 percent of nutrients absorbed by plants in any given season derive from the soil; the remainder derive from fertilizer. Therefore, sufficient application of organic fertilizer to nurture the strength of the soil and to invest the soil with superior capacity for bumper output is extremely important. In fact, because of a lack of organic fertilizer that has prevented the soil from obtaining organic replenishment, the fertility of the soil in numerous places in Fujian Province is on the decline. The results of general soil measurements made in Sanming Prefecture in 1975 showed a decline in the organic content of 70 percent of paddy fields. As compared with analytical data derived from the first survey taken in 1958, the organic content of cold sodden fields declined from an average 4.34 percent to 3.63 percent, of clayey infertile fields from an average 2.37 percent to 2.31 percent, and of sandy and porous fields from an average 1.97 percent to 1.91 percent. Unless this state of affairs is quickly reversed, continued growth in agriculture will be very difficult. There are numerous ways to increase the organic content of the soil. For the making of green manure alone there is Chinese milk vetch, field peas, sesbania, sun hemp, and Tagetes erecta [chou ju 5263 5468], but in terms of the current situation, development of fine duckweed seems most suitable. Judging from last year's experiences, propagation and extension of fine duckweed requires propagation in

autumn and winter. The speed of propagation of duckweed in autumn and winter relates directly to realization of the following year's plans for the growing of duckweed to fertilize the fields. Right now is the most opportune time for taking in hand the winter propagation of fine green duckweed, and every jurisdiction should tackle this task in a down to earth way. Looked at in terms of the province as a whole, in those areas that had a taste last year of the benefits to be derived from the growing of duckweed for the fertilization of the fields, enthusiasm runs highest for taking up winter propagation of it. The problem is that those who have not seen the advantages to be derived from the raising of duckweed are not very enthusiastic about growing winter duckweed. This requires that we do a good job of propaganda and of training in techniques of growing duckweed, and we should also operate some demonstration fields for comparison purposes. In short, every jurisdiction must seize the opportunity to do a good job of duckweed winter propagation work so that large quantities will have grown by spring to prepare sufficient fertilizer to reap a bumper harvest in agriculture this year.

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CSO: 4007

INTERCROPPING IN LATE-RICE SEED BEDS EXPERIMENT SUCCESSFUL

Fuzhou FUJIAN RIBAO in Chinese 9 Jan 81 p 2

[Article: "'Intercropping of Seedlings With Rice' Experiment Succeeds For a Solution to the Problem of Seedling Beds for the Late Rice Crop"]

[Text] Last year the Mingqi County Agricultural Institute took account of the situation in which the labor force is scarce relative to the amount of land available in mountain areas, most seedling beds for late rice are planted late, and outputs are low, and successfully experimented with "intercropping of seedlings with rice." Increases per mu from late crop seedling bed intercropping was from 200 to 400 jin more than from no intercropping.

In Mingqi County, the amount of labor is scarce relative to the amount of land available. In past years, mostly conventional varieties of rice were grown in the nearly 10,000 mu of late crop seedling fields, and from the seedlings planted latest (early August), output was very low, dragging down the averages for the late rice crop.

How could higher yields from the late crop seedling beds be realized? With the support of county agricultural departments, the county agricultural institute tried an experiment last year in "intercropping seedlings with rice" for the late crop.

By "intercropping of seedlings with rice" is meant that when the small seedlings begin to poke out and show green in the continuously cropped late rice seedling beds, they are transplanted to previously prepared rice seedling furrows in four rows among rice plants with a leaf age of from 25 to 30 days in a pattern that is 2.5 x 3 cun. Three or four seedlings are used in each clump planted. Following this transplantation, top dressings of fertilizer are applied as usual and cultivation is done to remove weeds until after the seedlings are removed from the beds, when the seedling bed is again leveled and turned under. Then the hybrid rice in the furrows is transplanted in a dense 6 x 5 cun planting pattern with intercropping of seedlings of a second crop between rows of the first crop. When seedlings are insufficient in number, available ones may be divided at the roots to make up the deficiency after which the fields are cared for.

Comparative experiments have shown that "intercropping of seedlings with rice" produces good quality seedlings and high output. The average yields from three mu of intercropped rice was 1,112 jin per mu, an increase of 400 jin over the conventional way of growing rice, and almost double the yields per mu from the "inverted spring planting" [0226 4429 2504].

Advantages of this "intercropping of seedlings with rice" are: ability to sow early and transplant early, long vegetative growth stage in the open fields, and ability to satisfy the need of hybrid rices for a long growth period. In the experiments conducted by this county agricultural institute, the "intercropping of seedlings with rice" usually resulted in full heading by the end of August or early September. Temperature and light conditions are good, and great control over avoidance of cold currents is possible. The grain formation rate is high and output is high. They figured out that given the nearly 10,000 mu of late rice crop fields in Mingqi County, if "intercropping of seedlings with rice" could be extended to all of them to produce increased yields of 200 jin per mu, a net increase in grain of nearly 2 million jin would result from this action alone.

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BRIEFS

FARM BY-PRODUCTS EXPORTS--Statistics released a few days ago by officials concerned with exports outside Fujian Province show that Fujian Province has overfulfilled state plans for each and every one of 20 different major farm byproducts including tea, mushrooms, pharmaceutical materials, feathers, narcissus flowers, honey, and white wood fungus. Output value of last year's exports was almost 100 million dollars, a 33 percent increase over 1979. The situation in rural villages is good, and production has grown to provide abundant supplies of goods for export in foreign trade. Last year, from feathers and feather manufactures alone, more than 6.2 million dollars in foreign exchange was earned, a 72 percent increase over the year before. White tree fungi have become the principal household sideline occupation for commune members in Fujian Province. Last year's exports of them reached the highest level ever recorded and commune, and brigade people increased earnings by more than 8.5 million yuan. [Text] [Fuzhou FUJIAN RIBAO in Chinese 13 Jan 81 p 1] 9432

ROSIN OUTPUT--According to statistics released a few days ago by provincial forestry industry authorities, Fujian Province's rosin output last year amounted to more than 60,100 tons, a more than 12 percent increase in output over the previous year. This has brought to an end a situation in which Fujian Province's output of rosin has fluctuated around 50,000 tons annually for the past 7 years. Both quantity and quality have surpassed highest recorded levels. Last year Fujian Province enhanced leadership for the production of rosin and instituted measures such as making the county the basic unit responsible for production, and a sharing of production in excess of quotas. Additionally, the forestry authorities established 121 resin bases in 22 counties and promoted new scientific techniques for moderately long tapping of resin, organizing a resin tapping corps of more than 20,000 people throughout the province. [Text] [Fuzhou FUJIAN RIBAO in Chinese 11 Jan 81 p 1] 9432

LONGQI PREFECTURE CITRUS--As of 5 January, more than 164,000 dan of citrus had been purchased from Longqi Prefecture, the major citrus producing region in Fujian Province, for a 103 percent completion of plan, and a 15 percent increase over the same period last year. In Longqi Prefecture, all echelons of leadership have given serious attention to citrus procurement, and a good job has been done of propaganda and indoctrination work among communes and brigades. Industrial and commercial administrative and management authorities have strengthened market controls, setting up inspection stations to prevent an outflow of citrus in contravention of policies, and to strike at speculative and profiteering activities. Supply and marketing units have increased the number of network procurement points as a convenience of the masses

in making sales. Changtai, Longhai, and Nanjing counties have readied a quantity of chemical fertilizer for use in making awards to those production units that have exceeded quotas in fulfillment of plan in order to promote overfulfillment of procurement plans. [Text] [Fuzhou FUJIAN RIBAO in Chinese 9 Jan 81 p 1] 9432

FALL PEANUT HARVEST INCREASE--Last year spring peanut production in Fujian Province fell as a result of June and July drought. In order to solve the problems of edible oil and peanut seeds for this year, every peanut producing area has striven to expand the grown of autumn peanuts, planting them on more than 108,000 mu, an increase of more than 20,000 mu over the year before last. Total autumn peanut output increased 19 percent over the year before last, and in the major peanut producing area of Putian prefecture, the peanut area was expanded by more than 4,500 mu, and output totaled 79 percent more than the year before last. Longqi Prefecture expanded its growing area by 9,000 mu, and output there increased by 20 percent. [Text] [Fuzhou FUJIAN RIBAO in Chinese 9 Jan 81 p 1] 9432

ARBOR DAY CIRCULAR--The Fujian Provincial People's Government issued a circular on Arbor Day activities. To mark Arbor Day, which falls on 12 March, the circular says, efforts should be made to widely publicize the significance of afforestation and the policy and measures for forestry development. The circular calls on people's governments at all levels to put forestry on their work agenda and to mobilize everyone to plant trees and protect forests. Leading cadres, the circular adds, should take the lead in doing this. [OW110053 Fuzhou Fujian Provincial Service in Mandarin 1035 GMT 8 Mar 81]

CSO: 4007

BRIEFS

LINTAO COUNTY OIL-BEARING CROPS--Thanks to the institute of the policy on planting crops according to natural conditions, Lintao County, Gansu Province, increased 1980's grain output by 30.11 percent and the oil-bearing crop output 116 percent over the 1979 figures. [SK260825 Lanzhou Gansu Provincial Service in Mandarin 1125 GMT 25 Feb 81]

CIRCULAR ON AFFORESTATION--The Gansu Provincial People's Government issued a circular on 4 March, urging efforts to carry out afforestation. The circular set forth seven tasks: 1) Arranging manpower, tools and time for afforestation, striving to plant more trees during spring period and paying attention to quality and economic results. 2) Encouraging communes, brigades, collectives and individuals to plant trees. Commune members who plant trees around their houses may own the trees. 3) All trades and professions should conduct an afforestation campaign. Trees planted around railways, highways and reservoirs may be owned by responsible departments. Neighboring communes and brigades may be owned by responsible departments. Neighboring communes and brigades may also plant and own the trees in the above areas. 4) Drawing up afforestation plans and giving guidance according to different conditions. 5) Cultivating saplings, running nursery plots well and supporting commune members to cultivate private plots. 6) Implementing the state council's emergency circular on protecting forests and checking arbitrary tree felling. 7) Strengthening leadership over tree-planting work. Governments at all levels, organizations, PLA units, schools, factories, mines and enterprises should organize personnel to participate in the afforestation campaign. [Lanzhou Gansu Provincial Service in Mandarin 1125 GMT 10 Mar 81]

CSO: 4007

NOTICE ON REFINED SUGAR SUBSIDIES ISSUED

Guangzhou NANFANG RIBAO in Chinese 2 Jan 81 p 1

[Article: "Price Subsidies for Unrefined Sugar Produced by Unrefined Sugar Shops Is Provincial Government Recent Announcement to All Locales"]

[Text] The Guangdong Provincial Government recently issued a "Notice on Price Subsidies for Unrefined Sugar Produced by Unrefined Sugar Shops".

The notice said: Beginning with the 1980-1981 pressing year, in accordance with Ministry of Finance regulations cancelling the one percent special treatment provision for a one percent reduction in the tax rate on Guangdong Province's unrefined sugar production, taxes will be levied at the uniform national 20 percent tax rate. The procurement price to be paid for each ton of unrefined sugar without tax will correspondingly be 6.30 yuan lower than during the last previous pressing season. In order to help development of unrefined sugar production and unrefined sugar procurement work, Guangdong Province will institute subsidies for unrefined sugar produced by unrefined sugar shops inasmuch as the current price paid for unrefined sugar procured by the state (ex-refinery [price]) and the sale price will not be raised for the time being. For each ton that the state procures, 10 yuan subsidy will be provided through commerce. However, in cases where state sugar mills do not have sufficient sugar for processing following joint decision by local public finance and other officials concerned, unrefined sugar shops that continue to produce unrefined sugar may, depending on circumstances, have their subsidies reduced or stopped. Unrefined sugar produced by small state-owned sugar mills will be handled in accordance with existing ex-refinery prices with no subsidization of prices.

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XUNDE COUNTY SUGARCANE OUTPUT INCREASES

Guangzhou NANFANG RIBAO in Chinese 14 Jan 81 p 1

[Article by Li Erkuan [7812 1422 1401] and Pan Weidong [3382 5898 2639]: "Xunde County's Total Sugarcane Output Increased 16 Percent Last Year; The More Specialized Contracting the Sweeter"]

[Text] Xunde County diligently implemented various policies for developing sugarcane production to harvest a bumper sugarcane crop last year. From the more than 157,000 mu of sugarcane fields in the county, it is estimated that as much as about 830,000 tons of sugarcane was sent to sugar refineries, an increase over the previous year of 16 percent, and an average yield of 5.32 tons per mu, a 1,28 ton increase over the previous year.

Xunde County is the foremost sugarcane producing region of Guangdong Province. Last year, everywhere throughout the county, provincial government regulations pertaining to quota purchase of sugarcane output were diligently implemented. Using the average requisition purchase quotas for each production team during the past 5 years and their fulfillment, figures were set team by team for sugarcane to be sold to the state during the 1981-1982 pressing year, and sugar and grain ratios were set, providing that production in excess of base figures could be exchanged at one ton of sugar equaling one ton of grain. Full rewards and full penalties would be instituted, and the situation would be guaranteed against changes for a period of 5 years. Additionally, the county appropriated 15,000 yuan for making awards to communes whose per unit yields exceeded the highest recorded levels, and for five communes who had the highest increases in per unit yields, thereby arousing the enthusiasm of the broad masses of cadres and commune members for developing sugarcane production.

Formerly, in most production teams in Xunde County, the production team would make unified assignment of the various tasks involved in sugarcane production. But since the quantity of output was not directly linked to the economic income of [illegible]ne members responsible for sugarcane output, the enthusiasm of commune memb[illegible]as impaired. Last spring, everywhere in Xunde County a system of responsibility for sugarcane production was promoted in which output was linked to the calculation of remuneration in contra-ts for this special kind of production. Fixed output for specific places was instituted with responsibility being placed on the workers, linking output to calculation of remuneration, awards

being given for output in excess of quotas and penalties being levied for failing to meet quotas. Last year 72 percent of the sugarcane growing places in the entire county instituted this kind of system of responsibility, and the enthusiasm of the broad masses of commune members for developing sugarcane production reached unprecedented heights. Last year new plantings of sugarcane throughout the county got underway 20 days earlier than the previous year, and various varieties of superior sugarcane were planted on more than 80 percent of the total area, a 25 percent increase over the year before. The effective number of sugarcane stalks per mu also rose, on average, by from five to eight stalks. Disease and insect pest prevention and control was also done more promptly and more carefully, and the quality of fertilizer was better than in previous years.

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SHANTOU READJUSTMENT OF CROP PATTERNS SAID SUCCESSFUL

Guangzhou NANFANG RIBAO in Chinese 3 Jan 81 p 1

[Article by Cai Yongxiang [5591 3057 4382] and Guo Chaojiao [6753 2600 5754]: "Shantou Prefecture's Readjustment of Crop Patterns Shows Outstanding Achievements; Last Year Grain Output Increased By 130 million Jin; Output of Peanuts and Chaozhou Oranges Increased By More Than 10 Percent"]

[Text] Even while assuring consistent increases in grain output, Shantou Prefecture made a planned readjustment of its pattern of agricultural production, making appropriate reductions in grain area, and expanding economic crops, such as peanuts and Chaozhou oranges, to achieve outstanding success. Last year the area planted to grain was reduced by more than 433,000 mu (mostly in the crop area devoted to spring harvested grain) for a four percent reduction. Grain yields increased, however, from the previous year's 1246 jin per mu to 1366 jin per mu for an average increase of 54 jin per mu or a 4.1 percent increase. Total output thus increased by 121 million jin for a 2.2 percent increase. Peanut growing was expanded by 130,000 mu over the previous year for a 14.7 percent in total output. Chaozhou oranges were expanded to 13,600 mu for a 12 percent increase in output.

Shantou Prefecture is a Guangdong prefecture with fairly dense population and an average of only one-half mu of cultivated land per person. Formerly it had a single crop grain economy in which the grain crop acerage was expanded at the expense of everything else. Though increased grain output resulted, and consumption grain for commune members superficially increased somewhat, some economic crops weresqueezed out as a result, meaning a loss in economic income for the peasants. While maintaining consistent increases in output of grain, suitable reductions have been made during the past 2 years in the grain growing area for an expansion of economic crops. As a result, both the grain and the cash that the peasants derive from the collective have increased.

While readjusting its pattern of agriculture, Shantou Prefecture has been able to achieve continuous increased grain output, principally because it has made the most of the advantages of the "embroidery style" method of farming, which increases output per unit of area. Duirng the past 2 years, average use of chemical fertilizer per mu of cultivated land in the prefecture has more than doubled over the quantity used in 1966. The large number of farmland water

conservancy projects constructed in the past were also used to great benefit last year in a strengthening of capabilities to resist calamity. Every jurisdiction further worked at scientific farming and vigorously promoted high output varieties of rice such as "Guichao," adapting general methods to specific situations in an implementation of various measures to increase output. This, plus perfection of various forms of a system of responsibility for production, resulted in more meticulous performance of every aspect of farm work, and better performance of plant protection work for consequent high grain output last year.

Following the autumn grain harvest, the Shantou Prefecture CCP Committee noticed that increases in grain production last year varied from place to place in the prefecture. The Chaozhou-Shantou Plain showed little increase in output, and total grain output of some major grain producing counties there even showed decline. As a result, it suggested to each locale that they not excessively reduce the area sown to grain; they should lay out their planting areas with the object in mind of striving to increase per unit yields, and insuring consistent increases in total output.

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CSO: 4007

AGRICULTURAL CADRE TRAINING TO SHIFT TO COUNTY LEVEL

Guangzhou NANFANG RIBAO in Chinese 11 Jan 81 p 1

[Article by Xu Wenyuan [1776 2429 0337]: "Rapid Progress in Training of Agricultural Cadres in Guangdong Province; This Year's Focus of Training Will Shift Primarily to County Level"]

[Text] Accompanying the establishment of various forms of a system of responsibility for agricultural production has been an increasing upswing in the enthusiasm of cadres and commune members in rural communes and production brigades to acquire a technical knowledge of agriculture. In order to meet this new situation, Guangdong Province began in 1981 to shift the focus of its technical training efforts in agriculture primarily to the county level.

During the past 2 years, emphasis by Guangdong Province's agricultural sector on training at the provincial and prefectural levels resulted in fairly rapid progress as an advanced province. A total of 31 cadre training classes were run and 1,929 agricultural leadership cadres were trained in them. Almost 100 separate classes of specialized vocational training of various kinds geared to needs were conducted to give training to 3,678 farm technicians. Training work below the county level continued to grow at the same time. At present, 60 percent of the counties (and municipalities)throughout the province have agricultural technical schools, and some communes have also begun agricultural training schools, rotationally training more than 117,000 grassroots level management cadres and rural mainstay technicians.

This year the focus of training will shift to the county level primarily. The Provincial Agriculture Department has required each county to act in accordance with the provisions of pretinent documents from the provincial government to make use of special funds for special training purposes, make sensible distribution of them, and operate training courses in a hardworking and thrifty manner, fully arousing the enthusiasm of every unit, and quickening the pace of training. Prefectures and counties are to act in accordance with requirements of the Ministry of Agriculture to give one rotational training every 3 to 5 years. It is stipulated that an entire prefecture or an entire county should quite realistically plan and implement plans, relying on units such as agricultural schools, agricultural institutes, and party schools, obtaining assistance from forces in scientific research, teaching, and the farm association system to put into rapid operation various kinds of training classes at various levels. The Provincial Agriculture Department has emphasized that while operating primarily county level technical training classes, continued attention be given as well to training classes at the county and prefecture levels.

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AGRICULTURAL SIDELINE PRODUCTS SOLD TO STATE

Guangdong NANFANG RIBAO in Chinese 28 Jan 81 p 1

[Article by NANFANG RIBAO correspondent Li Yilun [2621 4135 0243]: "Sales to the State of Agricultural and Sideline Products Completed--Bumper Harvest Reported in Shaoguan Suburbs; Contribution to the State Not Forgotten"]

[Text] Bearing in mind their duty to make contributions to the state during a bumper harvest, the broad masses of cadres and commune members in the suburbs of Shaoguan Municipality have completed all the sales of vegetables, pond fish, grain, edible oil, pigs and other sideline products for 1980.

Shaoguan is a new industrial city. With the growing number of workers, vegetables and other nonstaple food have always been in short supply. To arouse the peasants' enthusiasm in production and to support the city with increased production, the suburbs party committee vigorously enforced the system of responsibility for special jobs with pay according to output in 1980, and the number of production teams practicing this system accounted for 81.3 percent of the total number. As a result, they had good harvests of vegetables, pond fish and rice, apart from a reduced output of peanuts because of a drought. The party organizations at various levels of the suburb areas took advantage of the excellent situation to strengthen ideological and political work among the cadres and people and urged them to bear in mind the state and the overall situation, so that during a bumper harvest, they will not forget their duty toward the state and the city people. At the same time, the party organizations applied the necessary economic sanctions against those who sold collective products at high prices in the country fairs before their obligations to the state were fulfilled. In 1980, the suburb areas of Shaoguan overfulfilled their annual quota by selling to the state 736,800 jin of pond fish, a 13 percent increase over 1979. The amount of vegetables sold in the market in 1980 was 1.6 million jin more than that of 1979. The sales to the state of grain, edible oil and pigs were all completed.

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CSO: 4007

ZHONGSHAN COUNTY RURAL INCOME FIGURES GIVEN

Guangzhou NANFANG RIBAO in Chinese 26 Jan 81 p 1

[Article by NANFANG RIBAO correspondents Hao Tian [3185 3240], Tong Hao [4827 3185] and Guang Yuan [0342 0337]: "Zhongshan County's Rural Collective Income Increased by Nearly 100 Million Yuan--Strength of the Principles and Policies of the Third Plenary Session Demonstrated in Dashatian"]

[Text] Located in Dashatian, Zhongshan County is becoming increasing wealthy under the guidance of the principles and policies of the Third Plenary Session of the 11th Party Central Committee. In 1980, the total economic income of the rural collective in the county amounted to more than 287 million yuan, an increase of 91.65 million yuan over 1978. The average income for each commune member from distribution was 210 yuan, an increase of 79 yuan. In the county, the annual income of 96 production brigades was more than 1 million yuan.

As one of the important marketable grain producers in the province, Zhongshan County also produces large amounts of sugarcanes, pond fish and silkworm cocoons. Under the influence of the leftist line during the 10 years of turmoil, collective economy in the county did not make much progress. In the 12 years from 1965 to 1967, the total collective income increased by some 5,600 yuan, and the average income for each commune member from distribution increased by only 9 yuan. After the Third Plenary Session, the county party committee emancipated its mind and enlivened the rural economy in four different ways: First, making good use of the large land area and the potentials as the strong points of the county; second, taking advantage of the overseas population to develop the processing of imported materials and compensatory trade; third, giving full play to the superiority of a developed commodity economy in the comprehensive undertaking of agriculture, industry and sideline production; and fourth, taking advantage of the rich resources in the hilly and mountainous areas for the development and processing of special native products. At the same time, the county party committee also conscientiously implemented various rural economic policies of the party, set up and perfected various types of production responsibility system including the system of job responsibility for the cadres. These measures aroused the enthusiasm of the cadres and commune members in production, and a new atmosphere of high attendance rate, high labor efficiency, long working hours, and good quality farming prevailed over the county. In the past 2 years, the economy of rural communes and production brigades in the county developed rapidly with good harvests in 2

consecutive years. In 1980, the average per-mu grain output was as high as 1,174 jin, and the total output amounted to 955 million jin, being increases of 212 jin and more than 100 million jin over those of 1978 respectively. There were also good harvests of sugarcanes, pond fish and silkworm cocoons. The enterprises run by production brigades also developed vigorously, and, in 1980, their total output value reached 51.8 million yuan, a 51 percent increase over 1978.

Along with the development of production, this county also continued to increase its contribution to the state. In 1980, the county delivered to the state more than 110 million jin of marketable grain, an increase of more than 100 million jin over 1978 and more than 75,000 tons of sugarcanes, an increase of more than 2,000 tons. Procurement for foreign trade exceeded 100 million yuan, and its total export amounted to $50 million in foreign exchange. Bank savings in the city and the countryside was more than 110 million yuan, averaging 110 yuan for each person, which is an all-time high record.

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CSO: 4007

SANSHUI COUNTY FARM OUTPUT, DISTRIBUTION FIGURES RELEASED

Guangzhou NANFANG RIBAO in Chinese 26 Jan 81 p 1

[Article by NANFANG RIBAO correspondents Yang Beilin [2799 0554 2651], Chen Huazuo [7115 5478 1563] and Wang Qicong [3769 0796 5115]: "Greater Contributions From Marketable Grain Producing Areas as a Result of Production Responsibility System"]

[Text] The system of output responsibility for small groups and paying according to output, now popular in Sanshui County, has shown outstanding results. In 1980, the total output of paddy showed an increase of 13.1 percent over that of 1979, or 11.6 percent over that of 1977, then the best record in local history. Up to now, the county has sold to the state more than 177 million jin of marketable grain, averaging 787 jin from each person of the farming population. There were also overall increases in the output of sugarcanes, peanuts, pond fish and other cash crops. The average income from distribution for each commune member was 250 yuan, an increase of 62 yuan over 1979.

Sanshui County is located in the northern Jujiang Delta. Each person of the farming population here has an average acreage of 1.7 mu for rice, and each able-bodied person has 3.8 mu. This is a marketable grain producing area with rice as its main product. Since liberation, the collective economy here has been not only stable but also continued to improve despite the leftist influence and the setback to agricultural production. Compared with 1959, the total rice output of this county in 1979 increased 1.26 times; the total income for the production teams increased by 4.47 times; the public accumulation funds increased 1.8 times; and the average income from distribution for each commune member increased 3.25 times. The level of mechanization was also fairly high. Sanshui County summed up its experiences in the enforcement of the responsibility system based on these realities, and was convinced that in the majority of production teams, the responsibility system of setting output quotas for small groups, and the use of these groups as a productive force, can help arouse the enthusiasm of the production teams, the small groups and the individuals, which is advantageous for multiple undertakings and scientific farming in the intensive and extensive development of production. On this understanding, the county party committee has, since the beginning of 1980, practiced the system of output responsibility for the groups among one-third of all the production teams, and won outstanding results in the first 6 months. In 1980, 84 additional productions, which bring the proportion up to 57 percent of all production teams, adopted the same responsibility system for the late crops.

In the course of practicing the output responsibility system for small groups, Sanshui County was careful in handling the relationship between the production teams and these groups by making full use of the groups' enthusiasm under the unified leadership of the production teams. At the same time, it took three different precautionary measures against possible equalitarianism inside the groups: First, the work groups are formed through voluntary participation of the members, and each group generally consists of about 50 members. If there are not enough volunteer members to form a group, the production team can supply its people to bring the group up to its full strength. Secondly, inside each group, output quotas can be set for individuals, to be paid on a piece-work basis. If such a responsibility system is impractical, then output quotas should be set for collectives and the work-points will be recorded according to the number of working days and the grades of work as decided by the group. Thirdly, the production teams should exercise their leadership over the groups so that problems can be promptly detected and solved.

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CSO: 4007

BRIEFS

TONGREN PREFECTURE PRODUCTION--In 1980, the people in Tongren Prefecture produced a total of 1.54 billion jin of grain, an increase of 10.3 percent over 1979. The total output of rapeseed reached 26 million jin, an increase of 21.8 percent over 1979. Some 218,300 pigs were purchased during this period. The average weight of each pig was 28.5 jin heavier than that of 1979. The total value of agricultural production reached 364 million yuan. This was an increase of 3.8 percent over 1979. The peasants' income from the collectives increased by 10.8 percent over 1979, while each commune member's food ration increased by an average of 29 jin over 1979; savings in the countryside increased by 37.4 percent over 1979; afforestation increased by 86 percent over 1979; the total value of industrial output increased by 1.86 percent over 1979; and the total value of light and textile industrial output increased by 12.3 percent over 1979. [HK110840 Guiyang Guizhou Provincial Service in Mandarin 2315 GMT 2 Mar 81]

CSO: 4007

ARRANGEMENTS FOR GRAIN, OIL SUPPLIES DURING LUNAR NEW YEAR DISCUSSED

Shijiazhuang HEBEI RIBAO in Chinese 2 Jan 81 p 1

[Article: "Provincial Grain Bureau Actively Arranges To Supply Grain and Oil for the New Year and Lunar New Year"]

[Text] In order to provide for the livelihood of the people in cities and the countryside during the new year and during the lunar new year, the Provincial Grain Bureau is doing a good job of supplying grain and oil, which principally entails attention to four matters. First is organization of sources of supply to do a good job of distributing a variety of grains. After determining areas of surfeit and shortage of grain during November 1980, they convened a meeting attended by principal personnel from all locales who are in charge of grain transfers to make concrete arrangements. From Tangshan Prefecture, 22 million jin of polished rice was allocated to various medium size cities. From the prefectures of Cangzhou, Langfang, and Zhangjiakou, 2 million jin of red beans, 300,000 jin of broad beans, and 3 million jin of soybeans were allocated to the cities of Shijiazhuang and Tangshan to supply markets for the new year and for the lunar new year. Second is doing a good job in planning internal supply. Following instructions from the provincial government, a special notice was issued in which concrete arrangements were made. For the non-farming population in cities, some wheat flour and polished rice would be allocated from coarse food grain quotas using prevailing proportional supply of wheat flour and rice as the basis for calculating allocations. In the case of rural communes lacking grain, 2 jin of barley per person will be supplied within the uniform supply quotas. Supply of edible oil and edible seeds will be made in terms of prevailing supply quotas, with the quantity of edible oil, peanuts, and sunflower seeds being no lower than supply levels used last year. Third is further enlivening of negotiated purchases and negotiated marketing of grains and oil to increase the supply of varieties and to redistribute some food grains other than wheat and rice and some beans at negotiated prices. The supply of peanuts and sunflower seeds at negotiated prices is unrestricted for the enrichment of the lives of the people during the holidays. Fourth is conscientious implementation of the spirit of the notices from the State Council and from grain authorities on strict control over the prices of goods and restructuring of negotiated prices. In addition to the notice issued by the provincial bureau, a bureau director and six cadres have gone down to the grassroots level to conduct an investigation of the prices of goods. Grain departments at all levels are required to maintain consistent quality in the planned supply of grain and oil. Negotiated prices of grain and oil will all be those that were in effect as of 7 December 1980, and these prices can only go down but cannot go up. In the case of some high priced varieties, appropriate reductions will be made to insure stability in the grain and oil market.

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IMPROVEMENTS IN SYSTEM OF RESPONSIBILITY FOR PRODUCTION EXAMINED

Shijiazhuang HEBEI RIBAO in Chinese 21 Jan 81 p 1

[Article by He Fushun [0149 4395 7311], Liu Guizhen [0491 6311 6297], and Bian Jiangfan [6708 3068 4907]: "Constant Perfection and Improvements in Various Forms of System of Responsibility in Ding County"]

[Text] In the process of promoting a system of responsibility for production, every echelon of leadership in Ding County has both conscientiously honored the autonomy of production teams and the desires of the masses, and has actively and diligently given tailored guidance, thereby gradually strengthening and perfecting various forms of a system of responsibility for production in rural villages and creating favorable conditions for the reaping of a bumper harvest in agriculture this year.

Ding County is a large county with a population of more than 800,000. The province has a total of 52 communes, 504 production brigades, and 4,754 production teams. Natural conditions, economic circumstances, and cadre management levels vary greatly from one commune to another. Following the Third Plenary Session of the 11th Party Central Committee, one after another most brigades and communes set up systems of responsibility for production. In order to constantly solve the new problems that appeared following promotion of a system of responsibility for production in rural communes and brigades, thereby gradually strengthening and perfecting the promotion of growth in agricultural production, after the arrival of winter in 1980, leadership comrades in the County CCP Committee made thoroughgoing investigation and study of communes and brigades to gain an appreciation of the situations there, and to arouse the masses to a summarization of the various forms of their local various systems of responsibility for production. The principal form of a system of responsibility for production instituted throughout the county were contracting in specialized areas of production linking production to the calculation of remuneration, ad hoc contracting responsibility for tasks to completion without contracting responsibility for output quotas, and contracting responsibility for completion of segments of a larger process or of seasonal work. Institution of a system of responsibility for production vastly changed the shape of agriculture throughout the county. When serious natural disasters struck such as spring drought, autumn flooding, or windstorms and hailstones, quite good harvests were still reaped. Last year the bumper grain harvest was the second highest ever recorded with a total output of 540 million jin. Per unit yields of ginned cotton increased 55 percent over 1979, and output from other crops increased substantially as well. The vast numbers of cadre and the masses uniformly praised the system of responsibility as a fine way of

developing the rural village economy. It was also found, however, that some cadres were not positive in their attitude toward promotion of a system of responsibility, and were unable to properly organize and lead. The County CCP Committee's investigation and analysis showed the main reasons to be three. One was that as a result of the erroneous influence of leftism, some cadres believed that a system of responsibility that linked production to the calculation of remuneration was "retrogressive." Fearing to make mistakes, they dared do nothing. They said, "A system of responsibility is well and good today, but later when we're struggled against, we cannot run away." A second reason was that some cadres felt it was too much trouble and did not want to do it. Mostly they made a lot of appeals, but gave little practical direction. The third reason was that in some places consideration was not given to real differences in different locales, but rather a single pattern was rigidly adhered to. Individual cadres in places with more people than work to do feared failure, so thay did not actively promote a system of responsibility. The County CCP Committee realized that unless an adaptation of general methods to specific situations and tailored guidance were well combined, the rural village system of responsibility for production was bound to be adversely affected. Consequently, the County CCP Committee began by increasing cadre and commune member understanding of systems of responsibility, and took firmly in hand cadre ideological indoctrination. Since last November, the County CCP Committee has three times convened meetings of secretaries of districts and communes to employ study of documents, dissection of representative experiences, analysis and comparison to unify understanding of the system of responsibility by cadres at all echelons and to emphasize solutions as to how to go about matters in cases where nothing has been done, as well as how to strengthen and perfect matters where a beginning has already been made. Simultaneously, the County CCP Committee Party School ran training classes, in which the course content was how to operate a system of responsibility for production, through which more than 700 cadres released from production duties were rotated for training. The 52 communes throughout the county spent about 7 days time to train the leaders of production teams and cadres above accountant, numbering more than 2700 people altogether, thereby deepening their understanding of the benefits of having a system of responsibility and to increase their level of political consciousness and their initiative.

By way of forming a good combination of adaptation of general methods to specific situations with tailored guidance, principal leaders from the county, areas, and communes went down into communes and brigades to investigage and study, drawing on experiences from selected units to promote overall work. The secretary of the County CCP Committee put much effort into having cadres from leading organizations and leaders from CCP Committees in areas around cities to go together to the Liujiazhuang Production Brigade to summarize their experiences in forming a system of responsibility for "contracting in specialized areas of production and linking production to the calculation of remuneration with no changes carried for a period of 3 years." During 1980, this brigades grain yields reached 925 jin per mu for a total output of 1.1 million jin. As compared with the period before institution of the system of responsibility, this represented a three fold and a more than two fold growth respectively. Yields of cotton were 60 jin per mu, a 75 percent over the previous year; peanut yields were 100 jin per mu, a 50 percent increase over the previous year; and consumption grain for commune members showed an average increase from the somewhat more than 200 jin of the previous year to 543 jin. Average income increased from the between 30 and 40 yuan of the year before to 137 yuan for an arousal of the enthusiasm for production of the broad masses. Concurrently, the

County CCP Committee also summarized all aspect of representative experiences in "contracting in specialized areas of production linking production to the calculation of remuneration" and not linking production to the calculation of remuneration. It then gave conference briefings on each, printed and circulated a bulletin, printed and circulated 'Dispatch on Work in Rural Villages', and broadcast propaganda in promotion, thereby giving healthy development to various forms of a system of responsibility throughout the county. At the present time, 92.5 percent of the production teams in the county have instituted a system of responsibility, 0.9 percent of which are contracting in specialized areas of production, 73.4 percent of which are for individual kinds of crops or crops of all kinds that link production to the calculation of remuneration, and 18.2 percent of which do not link production to the calculation of remuneration. In this way a situation that keeps getting better and better has come about in rural villages throughout the county.

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SHEN COUNTY'S SYSTEM OF RESPONSIBILITY FOR PRODUCTION DISCUSSED

Shijiazhuang HEBEI RIBAO in Chinese 4 Jan 81 p 1

[Article: "The Less 'Cooking of Everything in a Single Pot' and the More the Tailored Guidance, the Better. Shen County Summarizes, Enhances, and Perfects Experiences With a System of Responsibility for Production"]

[Text] Recently the Shen County CCP Committee convened a tri-level cadre conference to summarize, enhance, and perfect experiences during the past 2 years with systems of responsibility for production. They learned from experience that implementation of systems of responsibility for production requires acting in a practical way, adapting general methods to specific situations, and giving tailored guidance in order to derive good results.

Following the Third Plenary Session of the 11th Party Central Committee, the CCP Committee of Shen County coupled realities of the county with study of the two Central Committee documents on the development of agriculture, realizing that the county's 1977 uniformly converted total output of grain, cotton, and edible oil was 8 million jin less than during the early period of cooperativization in 1955. Despite more than 20 years of hard toil, the fact of regression made them more fully understand the spirit of the Third Plenary Session of the 11th Party Central Committee, and made them realize if rural villages were to heal poverty and become prosperous, the principle of distribution according to work would have to be implemented, and a system of responsibility for agricultural production would have to be established and perfected. The County CCP Committee decided to vigorously promote a system of responsibility for work teams linking production to the calculation of remuneration. The director, deputy-director, and secretary of the County CCP Committee headed three work teams to individually probe advanced, mediocre, and backward production teams used as test sites in order to summarize experiences, and to convene meetings to do promotional work. Within a short period of time, 2,800 work teams were formed throughout the county only to have half of them suddenly collapse unexpectedly following summarization of experiences at the end of autumn.

Why is it that when one "makes up his mind to grow flowers, the flowers will not bloom"? The County CCP Committee discovered that most of the production teams that had continued to survive did so because the system of responsibility which related production to units was suited to the levels of development of the productivity of these production teams, while the failed teams did so principally

because the form of the system of responsibility for production did not jibe with realities in these teams. They also discovered that in the promotion of a system of responsibility that links production to units, quite a few communes and brigades did not simply imitate but rather created systems of responsibility for production of various kinds in accordance with the spirit of the two Central Committee documents on agriculture combined with realities in their own communes and brigades. For example, the Duanjiazuo Brigade in Liutong Commune instituted a system of responsibility with specialized contracts linking production to calculation of remuneration, and having already achieved high output in grain production, it went on to make further advances. The Zhan[illegible]un Brigade of Qiaotun Commune adopted the method of "responsibility being placed on specific individuals in a decentralization of management, with work being set in terms of output and rewards being made proportionally" for the management of its grain crops. Total grain output for the year increased from 270,000 jin in the year before last to 458,000 jin last year. In the growing of cotton, Guchen Production Brigade in Tulukou Commune instituted a system of "prescribing production on the basis of land, prescribing work on the basis of production, placing responsibility on work teams, and offering awards for excess production" to arouse the enthusiasm of commune members. On an area of 1,200 mu of cottonfields, output of ginned cotton was 100 jin per mu. In the long famed peanut growing Chichi Brigade, a system of responsibility for production was instituted under the "five unifieds" "placing responsibility on the individual or on work units, setting an amount of labor for an amount of production with full rewards or full indemnification." An unprecedented bumper harvest of peanuts was gathered, and average income for the entire brigade leaped from the former 79 yuan to more than 150 yuan. The County CCP Committee found inspiration from its experience of acting in accordance with realities and adapting methods to specific situations within brigades to establish various forms of a system of responsibility for production, keenly realizing that despite its study of the spirit of the Third Plenary Session of the 11th Party Central Committee, nevertheless problems in its ideological methods and work methods had not been completely solved, and that in promoting systems of responsibility it had again committed the same old errors committed in setting up cooperatives and learning from Dachai of cutting everything the same size and cooking everything in a single pot. Shen County is a large county, between 120 and 130 li from north to south and 70 to 80 li from east to west, in which soil quality and water conservancy conditions vary from one brigade to another, in which the levels of mechanization differ, and in which there is a very great difference in the levels of cadre management and the consciousness of the masses. Not to appreciate these realities and to insist on fitting the same size shoe to feet of different sizes will not work.

Both positive and negative experiences wised up the County CCP Committee, and they lost their mistaken methods of making a terrific din, cutting everything the same size and cooking everything in the same pot. In the promotion of systems of responsibility, they adhered to the correct policy of adaptation of general methods to specific situations and providing tailored guidance. First of all, they organized forces to dissect and summarize representative forms of systems of responsibility that had appeared throughout the county, after which they made a concrete analysis of the 2,862 production teams throughout the county, the essentials of which may be divided into three parts: production brigades in

which the collective economy was more or less stable could be channeled toward a system of responsibility of specialized contracting that related output to calculation of remuneration; production teams of no special note with a high level of management in which institution of specialized contracts could also be advocated with most adopting systems of responsibility of "five unifieds" or "four unifieds," or "three unifieds" linking production to calculation of remuneration. For individual distressed teams, there would be institution of contracts for guaranteed output with households, contracts for specific jobs with households, strengthening of leadership, and active assistance to solve problems. The County CCP Committee summarized classical cases in the implementation of various forms of a system of responsibility, and just before the lunar new year last year, it operated a labor management training course for par[illegible]ranch secretaries and brigade leaders in which all categories of typical examples gave separate briefings on their experiences to inspire every production team in the county to begin with realities as they existed in their own cases in learning about and studying the experiences of others in order to create methods they could use themselves. Dongwan Brigade in this county had for many years been a "triple dependency" brigade, but since its leading body had leadership ability and instituted a "five unifieds" system of responsibility relating production to calculation of remuneration, the production situation of cadres and commune members rose. Last year average earnings suddenly increased from the 18 yuan of the year before to 100 yuan. Many forms of systems of responsibility have been established in this county, and they have been constantly perfected and improved through practice to demonstrate more and more their great strength. During last year's great drought, uniform conversion of grain, cotton, and edible oil throughout the county still amounted to 364 million jin, and total income increased by 10 percent over the year before, making it the third bumper harvest year since establishment of the People's Republic.

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MECHANIZATION OF CROP PROTECTION NOTED

Shijiazhuang HEBEI RIBAO in Chinese 14 Jan 81 p 2

[Article by Wang Zhiqiang [3769 1807 1730]: "Almost Half of the Communes and Brigades in Chengde Prefecture Mechanize Crop Protection"]

[Text] Last Year, 193 communes and more than 1500 production brigades or nearly one-half the total number of communes and production brigades in Chengde Prefecture mechanized their plant protection.

Xinglong County in this prefecture mechanized crop protection earliest and fastest. As early as 1976, the Prefecture Bureau of Agriculture in cooperation with the Xinglong County Bureau of Agriculture set up a prevention and control test site for mechanized plant protection in this county, which showed substantial success. In 1979 a prevention and control method was adopted, which was operated by the people with support from the public sector, that saw growth in the number of power driven pesticide machines for plant protection to 806. Xinglong County's experiences were promoted throughout the prefecture, and through the method of planning by communes and brigades themselves, loans for communes and brigades to make purchases, and support from the state, the pace of mechanization of plant protection was accelerated. Formerly the entire prefecture had only 398 power driven pesticide machines. In 1980, this number increased to 4804 machines. Eleven maintenance and repair shops were established, and in a period of 2 years these shops trained 2496 key mechanized plant protection personnel to use and repair the machines.

Mechanization of plant protection has the following advantages: 1. It increases the area of control of diseases and insect pests. The area of grain crops throughout the prefecture in which diseases and insect pests can be controlled amounts to 2.33 million mu. 2. It permits more rapid prevention and control. Generally speaking, treatment can be given the entire area within a period of 3 days. 3. It saves labor, saves pesticide, and saves money. In last year's mechanized treatment of an area of 1.385 million mu, there was a saving of 266,800 man hours [sheng gong 4164 1562], a saving of 230 tons of pesticides, and a saving of 690,000 yuan in expenditures.

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CADRES SENT TO RURAL AREAS TO SUPERVISE TASKS

Shijiazhuang HEBEI RIBAO in Chinese 7 Jan 81 p 1

[Article by Commentator: "Organize Cadres To Go to the Countryside To Take in Hand Current Rural Village Tasks"]

[Text] Throughout the rural villages of Hebei Province, the Central Committee documents have been thoroughgoingly implemented, further purging the effects of the ultraleft line, promoting varied forms of a system of responsibility for production, and effectively arousing enthusiasm for production on the part of the broad masses of the peasantry. Agricultural and industrial sideline occupations have developed, and in some areas stricken with disasters, self-help for production has been launched and suitable arrangements have been made for livelihood. An unruffled mood prevails among the people in disaster areas, and the overall political and economic situation in rural villages is good. It must also be realized, however, that numerous tasks in rural villages have not yet been taken in hand. In some places, the Central Committee documents on a system of responsibility for agricultural production have not yet been communicated or have not been implemented pervasively. Numerous ideological problems that have arisen in the implementation of a system of responsibility await further study and solution. Some places have relaxed leadership over winter agricultural and industrial sideline industry production and have not organized sufficiently well or given sufficiently vigorous attention to joining the battle to combat drought, care for the wheatfields, or collect manure, in particular. In some places, cadre ideology is not sufficiently firm, ideological work has not kept up, and unhealthy tendencies have sprung up. All these matters merit the arousal of a high degree of serious attention on the part of our party leaders at all echelons, and large numbers of cadres should be rapidly organized and mobilized to penetrate into rural villages under the leadership of cadres from all echelons to help the grassroots communicate and implement the spirit of the Central Committee documents, set up winter season production, and do a good job of the various rural tasks.

Our central task this year is to do a good job of readjusting the national economy and to maintain a stable and unified political situation. Doing a good job of this year's agricultural production and doing a good job of current tasks in rural villages create favorable conditions for doing a good job of economic readjustment and for doing a further good job of achieving stability and unity. The experiences of many years have shown that whether harvests are good or poor and whether rural tasks are well done or not greatly affect the development of the entire national economy and the political situation. In years when there are bumper agricultural harvests and a good job has been done on village tasks, our work is active, the national

economy develops, and the masses are jubilant. When matters are just the opposite, the opposite result occurs. Hebei Province had a drought last year, as a result of which the grain output declined and both agricultural production and the people's livelihood were affected. Increasing agricultural production this year and striving for an all-around bumper harvest in agriculture this year hold extremely important significance for doing a good job in readjusting the national economy, for reducing and ameliorating the hardships occasioned by natural disasters, and for consolidating and developing a stable, unified political situation. We are already in the last month of the year on the lunar calendar, and in another 20 days or so it will be the lunar new year. After New Year's, we will very quickly enter the very busy season of spring plowing--a period of time that is extremely important. If there is a slight delay, output and work will be adversely affected. Consequently, it has been decided that to act with maximum speed to organize cadres to go to the countryside, since penetrating to the grassroots level to buttress the leadership of work in rural villages and overcome current problems existing in rural work is an urgent current task.

Once cadres from all levels go down to the countryside, what will they do? First they will communicate and implement the Central Committee documents in a system of responsibility for agricultural production. This is a major task in rural villages for the immediate future. The cadres who go down to the countryside will use the method of dividing up work and assigning a part to each individual or group, make step-by-step explanations and publicization to the broad masses of commune members, and make the Central Committee documents well known in every household so that every person understands them. In the process of communication and implementation, there should be no simple recitations or going through the motions in a perfunctory way. There must be diligent organization of grassroots-level cadres and the masses of commune members for a combined summarization of last year's experiences in the implementation of a system of responsibility for production, repeated discussions in order to grasp the spirit of the documents, and a focusing of the minds of the numerous cadres and the commune members on the spirit of the Central Committee documents. This must be related to practice with discussion of the formulation of definite means of effecting implementation. In the case of those places that have not instituted a system of responsibility, systems of responsibility that are suited to local conditions should be established in accordance with the spirit of the documents and the desires of the masses. In places that have already established a system of responsibility for production, a good job of improving and perfecting that system should be carried out, as required in the Central Committee documents. Second, the rescue of production should be taken in hand by the disaster areas themselves, with a good job being done in agricultural and industrial sideline occupation production in disaster areas, and further arrangements being made for winter and spring production and the livelihood of the people in disaster areas. Before and after the lunar new year, examination should be particularly made of communes and brigades in serious disaster areas and disaster areas in general, as well as of hard-hit households in disaster area communes and brigades. When problems are discovered, they should be conscientiously solved. Third is a need to strengthen winter and springtime care of the wheat, adapting general methods to local situations to press the wheat firmly into the ground, maintain soil moisture and warmth, prevent the death of seedlings during winter, and formulate pledges to protect the wheat, in order to put an effective stop to the grazing of animals in wheatfields, and to prevent the trampling of wheatfields by people and livestock. Fourth is the need for prompt attention to preparations for planting, particularly taking in hand the preparations for the

sowing of early ripening crops. In all brigades where conditions permit, every effort should be made to grow more early ripening crops so as to shorten the current disaster period with grain for consumption. Additionally, the wanton cutting and denuding that is so serious in some places, the stealing of timber and destruction of forests, and the plundering of forestlands must be firmly halted. Once cadres from every echelon reach the countryside, they should coordinate with forestry, political, and legal authorities in a wide-ranging publicizing of the spirit of State Council and provincial government notices on the wanton cutting and denuding of forests and the programs and policies for the protection of forests. They should deal sternly with matters involving destruction of forests, striking at and punishing scofflaws in order to put a firm stop to this evil tendency.

All comrades going down to the countryside to work and cadres at all levels who will continue to work in rural villages should immerse themselves in investigation and study, give attention to work methods, and arouse revolutionary spirit to improve their workstyles. They should guard against giving blind directions, issuing orders that are divorced from reality, or using leftist rules and regulations that bind the hands and feet of grassroots cadres and masses. They should guard against tailism, against overcautiousness, and against a relaxation of leadership. They should use effective and workable methods of dividing up work and assigning a part to each individual or group, and of combining work at single sites with that of the total area. They should effectively intensify ideological and political work among grassroots-level cadres and the masses of commune members. They should organize the large masses of cadres and commune members to diligently study the New Year's Day editorials in the RENMIN RIBAO and JIEFANGJUN BAO, and indoctrinate the cadres and masses in adhering to the socialist road, in adhering to the people's democratic dictatorship and the dictatorship of the proletariat, in adhering to the leadership of the party, in adhering to Marxism-Leninism and Mao Zedong Thought, and in halting the appearance in rural villages of gambling and other illegal and disruptive activites. They should overcome feudal superstitions, lavish display and waste, and feasting and carousing in connection with weddings and funerals. They should particularly indoctrinate rural cadres and party members to function as models and leaders in everything, demonstrating a revolutionary spirit of fearing neither hardships nor death, a spirit of eradicating myriad difficulties to seize victory, caution and conscientiousness, arduous struggle, respect for discipline and obedience to laws, keeping one's mind on one's work, utter selflessness, working for the benefit of others, maintaining stability and unity, overcoming unhealthy tendencies, uniting with the broad masses of commune members to share both tears and laughter, singlemindedly doing a good job of winter and springtime production, and doing a good job of all rural village work in order to achieve an overall bumper harvest in agricultural production this year.

9432
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NEED FOR RODENT EXTERMINATION MEASURES DISCUSSED

Shijiazhuang HEBEI RIBAO in Chinese 7 Jan 81 p 2

[Article From Provincial Farm Crop Disease and Insect Infestation Monitoring and Reporting Station: "Exterminate Destructive Rodents To Protect Bumper Harvests"]

[Text] Reasons for and Seriousness of Large Incidence of Destructive Rodents in Hebei Province.

The long drought in Hebei Province has favored the proliferation of destructive rodents, and the use of severely toxic pesticides to wipe out the rodents has also poisoned large numbers of cats, hawks, weasels, and such natural enemies of rodents, upsetting the ecological balance and losing the natural means of controlling destructive rodents. This, plus the lack of a general effort at elimination and control, has brought about a provincewide infestation of rodents. Last year the area of rodent pests covered more than 20 million mu throughout the province, of which more than 15 million mu was farmland. They infested 5 million mu of grasslands and unproductive lands. Formerly, rodent infestations occurred principally atop and beneath embankments, but last year they occurred in plains areas in general. Formerly, damage was greatest from ground squirrels, zokors, and sandy soil rodents [shatushu 4263 0960 7857], but last year brown house mice, large hamsters, and small house mice also caused major damage. These destructive rodents, which eat a variety of things and exist in large numbers, pose a substantial threat to agricultural output. Corn, millet, gaoliang, peanuts, soybeans, sugarcane, and melons have all sustained damage. In Shijiazhuang Prefecture, the rodent-infested area covers 1.92 million mu, and damage to grain has run to more than 75 million jin. The destructive rodents have an extremely keen sense of smell, and strong digging capabilities. A single adult rodent can dig up and destroy the seeds on from 0.2 to 0.3 mu of land in a single night. In addition, destructive rodents also destroy grasslands, damage embankments, and transmit diseases.

When Is the Best Time To Exterminate Farmland Rodents?

Inasmuch as ground squirrels, hamsters, and such field rodents winter in their lairs without coming out, the most favorable time to control them is when they come out of hibernation in spring and before seeds are sown. During this period, eradication of rodents can be done very effectively with a small expenditure of funds, and this is also the key time for determining effectiveness for the entire year. House mice such as the brown house mouse leave their nests in winter to run around, and preventive measures may be taken against them year round. In early spring, vegetable

crops and sugarcane are scarce in rural villages, and this time offers two major advantages for the eradication of field rodents. One is that their body conditions have greatly deteriorated as a result of having wintered over, and when they come out of their nests in early spring, they are anxious to find something to eat. Since food is scarce at this season, and since they are not fussy about what they eat, good results in control can come from use of poisoned bait. Additionally, after the rodents come out of hibernation in spring, they mate and carry young, so wiping them out in early spring results in "wiping out many by killing one." Secondly, early spring is a slack season for farming, making for ease in mustering labor forces to launch preventive attacks.

Eradication of Field Rodents Means Fighting a War of Annihilation and Doing a Good Job of the Four Combinations.

Destructive rodents are quite able to scurry in every direction, so prevention and control tactics require organization of a large-scale war of annihilation. Take the case of Zanhuang County, for example, where very good results were obtained from unified action, unified foumulation of poisons, unified timing in setting out poisons, unified maintenance of poisoned baits and poisoned traps, and unified recovery and disposal of dead rodents. They also instituted a method whereby work-points were recorded or wards made for the extermination of rodents; this further aroused the enthusiasm of the masses for the eradication of rodents.

For pervention and control, general methods must be adapted to specific local situations to do a good job of the four combinations. The first combination is the combination of early spring poison bait control and catching and killing in traps with biological control. In places with a fairly dense rodent population, it is necessary to use poisoned bait for control in an effort to wipe out the main forces of destructive rodents, following up with other prevention and control methods in order to control any resurgence and damage from rodents. The second is a combination of efforts against both field rodents and household mice. Control in the fields without control inside the villages makes for difficulties in overall control of rodent damage. During the winter season, household rats and mice congregate in rural buildings, where they may be poisoned (but other sources of grain for rodents must be cut off). The third is a combination of extermination by special teams and extermination by the masses. The fourth is a combination of rodent extermination and the development of sideline production. A wide area exists for the use of rodent pelts, which can be purchased by the state for processing to increase economic benefits. Functional units concerned at every level should intensify cooperation, and agricultural authorities should do a good job of finding out about rodents and give technical guidance on their elimination. Commercial supply and marketing authorities should do a good job of supplying chemicals to exterminate rodents and of buying up rodent pelts, and handicraft industry authorities should do a good job of producing and supplying traps to eradicate rodents.

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GUANDAOLING WATER DIVERSION TUNNEL PROJECT COMPLETED

Shijiazhuang HEBAI RIBAO in Chinese 6 Jan 81 p 1

[Article by Zhang Quan [1728 3123] and Gan Qin [3927 0530]: "Yi County Guandaoling Water Diversion Tunnel Completed, Through a Display of Revolutionary Spirit of 'Fearing Neither Hardships Nor Death'"]

[Text] Following 10 months of arduous struggle, in which they displayed the revolutionary spirit of "fearing neither hardships nor death," cadres and civilian laborers from the Yi County farmlands construction team triumphed over all kinds of difficulties to complete work on 20 December 1980 on the longest water diversion tunnel in the county's water-conservancy project, the Guandaloing water diversion tunnel.

The Yi County Guandaoling water diversion tunnel is the longest tunnel in any of the farmlands water-conservancy projects throughout the county. Leaders of the farmlands construction team aroused the enthusiasm for labor of the large numbers of construction cadres and civilian laborers, and following wide-ranging discussions among the civilian workers in early 1980 they established quantitative and qualitative criteria, ordered the needed construction materials for the project, and set up a system of responsibility for production, with rewards and penalties related to how well or how poorly and how fast or how slowly the prescribed norms were completed. Since the norms were reasonable, rewards and penalties were clearly spelled out, and leaders of the farmlands construction team intensified ideological education work, the enthusiasm of the construction cadres and civilian laborers for work was aroused. They displayed a revolutionary spirit of "fearing neither hardships nor death" in which cadres and civilian laborers battled day and night to put up scaffolding, put in shoring to prevent caveins, removed dangers, and worked to maintain a rate of progress in tunneling and to conserve materials. Last October, an underground spring erupted at the entrance to the tunnel, pouring out more than 600 cubic meters of water a day and filling the tunnel work area with frigid springwater. In order to assure completion of the water diversion tunnel project on time and at quality specifications, leading cadres from the County Water Conservancy Bureau and officers in charge of the construction team organized machine pumping of the accumulated water day and night, while continuing the digging in cold springwater more than 1 chi deep. Never complaining of hardships or weariness, the civilian laborers in the less than 100-man construction team victoriously completed the 3-meter-wide, 2.5-meter-high, 1503.3-meter-long Guandaoling water diversion tunnel after 10 months of hard work, thereby creating conditions for the conversion of some of the drylands in Yi County to wetlands.

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COUNTY TAPS UNDERGROUND WATER FOR DROUGHT PREVENTION

Shijiazhuang HEBEI RIBAO in Chinese 6 Jan 81 p 1

[Article by Ma Weilin [7456 4850 2651], Ceng Yingzhong [2582 5391 1813], and Tian Kezhong [3944 0344 1813]: "Dacheng Actively Develops Underground Water To Combat Spring and Winter Drought; Adapts General Methods to Specific Situations, Makes the Most of Advantages, and Stresses Results"]

[Text] The numerous cadres and masses of Dacheng County have taken hold of a favorable opportunity to spark a campaign for sinking new wells, repairing old wells, and searching for former wells, using every manner of means to develop underground water sources to resist drought and save the wheat. In the last month or so alone, 587 new wells have been sunk throughout the province, 206 wells have been repaired or fitted with pumps, 280 wells that had been abandoned and buried beneath the soil have been rediscovered, and work has begun on the digging of 23 large ponds for use as catchments.

In 1980, Dacheng County had a total of 380,000 mu of wheat. Water resources on 220,000 mu of this total amount were fairly good, permitting continued watering, but on the remaining 160,000 mu of wheat, the threat of serious drought existed. The County CCP Committee and the County Revolutionary Committee analyzed the prevailing situation and realized that in order to triumph over drought and save the summer wheat harvest and the spring sowing, they would have to overcome the prevailing mentality of dependence on surface water and use all available means to develop underground water. To this end, they buttressed the well-digging leadership team and divided the entire county's 19 communes into five battle zones, with the County CCP Committee secretary, the Standing Committee, and leading comrades in each of the country bureaus dividing responsibility for the battle zones and communes to lead the people of the entire county in a surge to develop underground water.

During the campaign to develop underground water, this county made sure to adapt general methods to local circumstances, make the most of advantages, do only what it had the ability to do, and emphasize results. Quancun, Lidan, and Nanchaofu communes, which are located near the Ziyahe and have a high water table, and where the masses have long dug wells and used windlasses and buckets to raise water to irrigate their fields, made a great effort to arouse the masses to dig more wells. Within a period of several days, the Yujiawu Brigade dug 450 shallow wells; these wells have already been used to water the wheat fields. In former years this county had sunk 4,700 guozhui [6938 6923] wells, but because they were not well

maintained, more than 3,300 of them were buried or destroyed. In order to make use of these old wells, many production teams organized their cadres and old commune members in a campaign to rediscover the old wells. Xingzhuang discovered 80 old wells, which have been put back in use following repairs. In order to hasten progress and increase quality, each commune and brigade set up well-digging and well-repairing crews in an overall promotion of a system of responsibility for production in which projects were contracted for and "set quotas, set times, set quality, set expenses, set workpoints, and set rewards and penalties" were instituted. Wangtun Commune set up a well-digging team composed of six people who used a small tractor in their work to dig one well every 2 hours. It dug 58 wells in more than 10 days' time. While engaged in a wide-ranging effort to sink new wells, repair broken wells, and seek out old wells, this country also organized a more than 20,000-man labor force to dig the silt out of Dabaogan ditch and Qianmi ditch, in a project aimed at diverting and storing water. It also built six new pumping stations and four sluice gates for water catchments. It expanded the watering area by 40,000 mu and raised waterlogging elimination standards on 44,000 mu. Though they are now in the dead of winter, the broad masses of cadres and people of Dacheng County do not fear the severe cold but continue their campaign of farmland water-conservancy construction, in which the sinking of wells to combat drought is the main ingredient.

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LUANNAN COUNTY MARINE PRODUCTS FARM INCREASES OUTPUT

Shijiazhuang HEBEI RIBAO in Chinese 1 Jan 81 p 2

[Article: "Liuzan Marine Products Farm in Luannan County Increases Its Annual Output Value 8.5-Fold Over That of Last Year"]

[Text] During 1980, the Liuzan Marine Hatchery in Luannan County produced more than 80,000 jin of prawns and dace, with an output value of more than 60,000 yuan for a 8.5-fold increase over the same period last year. Each unit of labor produced an output value averaging 2,400 yuan for the collective. The Liuzan Marine Hatchery has 10,000 mu of water surface for the raising of fish. Its supply of both sea and fresh water is abundant, and diversion of water and gathering of young fish and prawns is easy. For the last several years, however, administration and management have been chaotic, and both quantity of output and output value declined year by year.

Following a 1980 decision to operate independently with an independent accounting system, personnel were streamlined and various systems of responsibility were promulgated. They divided all personnel in the hatchery into three specialized units on the bases of specialty as follows: intensive breeding, extensive breeding, and maintenance, and instituted "four fixeds and one reward," meaning each unit would have a fixed amount of labor, fixed amount of output, fixed income, fixed net benefits, and a reward for fulfillment of quotas or penalty for failing to meet them. This aroused the enthusiasm of employees for striving to do a good job in hatchery production. When the fish and prawns were harvested in the fall, despite the cold water in the depth of the autumn season, all the employees crowded each other to get into the water to do their jobs. The employees inventoried all equipment and materials, prepared equipment registers and placed equipment and materials in storage, drawing them after registering in accordance with procedures. They were also responsible for maintenance and repair of equipment, and those who purposely damaged equipment were required to pay indemnities.

All materials drawn for use by each of the units were recorded into the accounts as costs. Conservation was rewarded and waste was penalized. In this way, by repairing old gate opening and closing equipment, boards used as sluice gates, and nets, a saving of more than 5,000 yuan was effected, which was equal to 20 percent of planned expenditures.

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GREAT GROWTH IN ZHANGJIAKOU LIVESTOCK INDUSTRY REPORTED

Shijiazhuang HEBEI RIBAO in Chinese 1 Jan 81 p 2

[Article by Hu Dong [5170 2767]: "Substantial Growth in Zhangjiakou Livestock Industry Through Readjustment of Structure and Making the Most of Advantages"]

[Text] Substantial growth occurred in the 1980 output of the livestock industry in Zhangjiakou Prefecture. October statistics show that sales of large livestock in the prefecture increased by 47 percent over the same period in the previous year; requisition purchases of slaughter sheep increased 39 percent over the same period during the previous year, and requisition purchases of milch goats increased by 27 percent over the beginning of the year. Requisition purchases of fattened hogs, of sheep wool, and of pork and beef for export reached highest recorded levels.

Zhangjiakou Prefecture possesses superior conditions for development of herbivorous animals. In order to make full use of this local advantage, beginning in 1980, the Prefecture CCP Committee and provincial administrative offices combined a readjustment of the internal structure of agriculture with a summary of the lessons of past experiences to correct the past emphasis on grain to the exclusion of livestock raising, and adopting a series of measures as follows: 1) close attention to a system of responsibility for livestock industry production; general promotion of collective livestock raising with five fixeds and one reward; sharing within brigades of raising and breeding by households; livestock raising by specialized households. 2) In view of the deterioration in the grasslands and grassy slopes, as well as the infertility of the soil with consequent decline in quantity of grass output, plus overloading of pasturage with livestock, attention was given to planned planting of grasslands and rotational cropping of fields of grass. Last year more than 410,000 mu of grassland was planted. At the same time, in an adaptation of general methods to local situations, enclosed ranges, barbed wire cattle lots, and electrically-fenced pens, requiring little investment and bringing quick results, were installed on more than 59,000 mu, both to protect the range and to increase the quality and quantity of grass fed to the animals. Third, the prefecture and the counties individually operated classes in the building of grasslands, veterinary preventive and treatment practices, and breeding to improve herds. This improved technical levels in veterinary medicine. Fourth, commune members were actively encouraged to grow sheep by allowing them to get greater real economic benefits as quickly as possible. Now more than 780,000 sheep are being grown by commune members throughout the prefecture. Fifth

was support to poor brigades in mountain areas for the raising of sheep and cattle. The state allocated some capital to help brigades in places with a large area of grassy slopes where a great potential exists for development of the livestock industry to develop livestock industry production. Sixth, concerted efforts were made to look after the grass and protect the livestock through the organization of commune members to cut and gather the grass and to collect tree leaves, to turn old grass for sunning, and to give attention to the storing of hay for use in feeding.

The 1980 drought in Zhangjiakou Prefecture lasted a long time; the stricken area was large and the damage great. But as a result of the active implementation of livestock industry policies and the adoption of a series of measures to combat disaster and protect the livestock, nowhere in the prefecture did problems arise with animals dying as a result of the disaster. In a year of great disaster, the livestock industry continued to grow.

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QING COUNTY HAS GOOD OIL-BEARING CROPS HARVEST

Shijiazhuang HEBEI RIBAO in Chinese 1 Jan 81 p 2

[Text] In 1980, Qing County joyously harvested a bumper crop of oil crops from 100,000 mu of land. Total output amounted to 10.93 million jin, a more than 7.3 million jin increase over the bumper harvest year of 1979.

Qing County has a lot of land, much of which is low-lying. The main reason for the great increase in output of oil-bearing crops in 1980 was the adoption of three measures. First was promotion of the "three field" system of cultivation. One-third of the county's cultivated land became fields of major emphasis, which were farmed intensively to insure output of grain. Another third were ordinary fields where green manure was grown or where green manure was intercropped with grain, thus both planting the soil and nurturing it. The final third was fields for economic crops on which oil-bearing crops and other economic crops were grown. Second was a readjustment in policies governing requisition procurement of grain and oil.

Last spring the County CCP Committee and the County Revolutionary Committee announced that in the planning of output and when selling to the state or when buying by the state, accounts would be settled in a uniform way with 1 jin of oil equaling 10 jin of grain. Simultaneously appropriate adjustments were also made in the amount of output of grain and oil and the requisition procurement quotas for some brigades. In this way, each commune and brigade could produce grain if that was appropriate, or produce oil if that was appropriate in a plan for the growing of crops that fitted general methods to local conditions. Third was promotion of a system of responsibility for production. Last year more than 1,700 production teams in the county instituted various forms of a system of responsibility such as specialized contracting, job by job contracting, or calculation of remuneration on the basis of set norms in the growing and tending of oil-bearing crops.

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REPORTS ON HUBEI'S DISASTER AREAS

United Nations Fact-Finding Mission

Wuhan HUBEI RIBAO in Chinese 10 Feb 81 p 1

[Text] Between 16 and 19 January, the United Nations Disaster Relief (UNDRO) Fact-Finding Mission visited the Jingahou disaster area in Hubei Province for an examination of the 1980 disaster situation. In the course of their travels, the fact-finding mission was greatly impressed with what they saw and what they heard. The head of the fact-finding mission, Mr Wilmots-Vandendaele feelingly said: "Only China could withstand such a disaster."

When the fact-finding mission reached Sanzhou Commune in Jianli County to survey the rural countryside that was covered with floodwaters when the dikes burst, although the disaster had taken place half a year ago, waterplants left there by the surging floodwaters could still be seen in the tops of trees taller than a man, and hamlets were littered with broken bricks tiles, and cement electric power poles that had been knocked over by the floodwaters. They also saw row upon row of new houses rising on the scars of gullies that had been filled in, and in the fields and gardens from which the water had receded were growing lush green wheat and vegetables. The peasants were full of vigor, confident they would triumph over hardships to restore their gardens. Comrades in charge at this commune briefed the members of the fact-finding mission. They said that more than 500 civilian houses in the commune had been damaged by the disaster, and that more than 80 percent of them had already been newly repaired. An additional small number of peasants were still living in shacks temporarily while awaiting selection of sites or for other reasons.

At Xiaozui Production Brigade, the fact-finding mission saw more than 50 temporary shacks covered with asphalt felt and rushes. They went into the shack of a householder named Zheng Cailiang [6774 2088 5328] whose household had seven people. Zheng's mother was making a fire to do some cooking. The fact-finding mission asked about living conditions, and Zheng Cailiang pointed to the snowy white rice in the shack and replied, "After the disaster, the state supplied every disaster victim with 45 jin of grain per month. But the state has difficulties too, so we cannot simply depend on the state for help; we have to do a good job of production to help ourselves.

The fact-finding mission's automobile moved passed a tract of lush green rice fields to the worksite at the breach in the dike, where they saw a breached section more than 100 meters long had been already half rebuilt, all along the 100 li long dike, there was a hubbub of human voices. The comrade in charge of the worksite said that more than 6,000 people from the commune were working on the dike, and in addition to

filling in the breach, they were raising the height of the dike by 6 decimeters, and widening it from 2 meters to 4 meters. Looking out at that enthusiastic spectacle of a horde engaged in battle against the wind and snow was a truly moving experience. Mr Wilmots-Vandendaele waved at them and shouted, "OK! OK! (meaning good).

The fact-finding mission sighed with deeper emotion at the rudimentary school and hospital at Ganchang Commune in Gongan County.

Here were six shacks, one of which contained a junior middle school class, and five of which contained primary classes with a total of more than 160 students. The comrade in charge at the commune said that there had formerly been more than 400 students in middle and primary school here, but after the dike had burst, they had been forced to scatter into more than 10 schools. Members of the fact-finding mission went into a primary class shack where they saw only asphalt felt used to make a roof and mats all around to form walls. The pupils were holding class in the severe cold of windy and snowy weather. When the teachers saw the guests arrive, they all began to applaud in welcome.

Mr Wilmots-Vandendaele asked, "Are you still trying to hold classes under such difficult conditions?"

Teacher Chen Siqing [7115 0934 3237] replied, "Even if conditions were worse, the children would not want to waste precious study time."

The fact-finding mission respectfully took leave of the teachers and walked into the inpatient department of a row of six shacks that formed the commune hospital, and in which there were 15 beds. Doctors were concentrating their attentions on treating the illnesses of patients.

One doctor said that the floodwaters had entirely washed away the hospital, and because the number of patients increased several fold daily as a result of the disaster at that time, with the help of a higher level CCP Committee and the masses, a grass shelter was erected on the dike; beds and equipment were hunted up and returned, and disaster victims were treated on the spot. This doctor pointed at a more than 20 year old patient and went on to say, "This is the only patient still in hospital with a disaster related illness; the others have all left."

Upon conclusion of the fact-finding, Mr Wilmots-Vandendaele said, "Today we saw here the great disaster that resulted from a flood, and we also saw how effectively the Chinese people have carried out work to combat the disaster."

Preparations for Spring Plantings

Wuhan HUBEI RIBAO in Chinese 10 Feb 81 p 1

[Text] Means of production units at all levels in Hubei Province have readied sufficient materials used by agriculture for this year's rural village spring planting and production. According to the statistics, as of the end of last year, comparison with the same period last year of the means of production made ready in all locales throughout the province showed a 23.7 percent increase in the amount of chemical fertilizer, a 22.5 percent increase in the amount of pesticides, a 27.1 percent increase in farm machines, preparation of more than 18 million medium and small farm implements, and more than 7,000 tons of plastic sheeting.

The year before last, means of production units at all levels organized survey teams to go to the grassroots and to disaster areas to determine what new requirements the readjustment in the internal structure of agriculture had placed on means of production supply work, and to figure out the supply and demand situation for the means of production in disaster areas. After provincial companies had surveyed more than 30 counties and communes in six different prefectures in cluding Jingzhou, Huanggang, Xiangyang, Xunyang, Enshi, and Yichang, a provincewide means of production meeting was convened, which arranged for the preparation of materials and the supply of the means of production to be used in agriculture this year. In Xiangyang, Suixian, Zhuxi, Zhushan, and Dang-yang counties, means of production units organized personnel to go into communes and brigades to help production units figure out their needs for production materials for this year and to sign contracts for the supply of their needs. Production units in Xiaogan Prefecture have readied more than 15,000 cubic meters of lumber for spring planting and production.

Right now, every locale is busy organizing the transportation of their materials.

Xianning Prefecture Readies Planning

Wuhan HUBEI RIBAO in Chinese 10 Feb 81 p 1

[Text] Following 1980 year end distributions in rural communes and brigades in Xianning Prefecture, morale of the masses of commune members is running high, and they are now throwing themselves with extremely great zeal into the battle to win a new bumper harvest in agriculture in 1981.

Despite the natural disasters of serious floods and low temperatures that occurred in this prefecture during 1980, because all echelons of leadership emancipated their thinking, liberalized policies, gave great attention to diversified production, and adapted general methods to specific situations to build various forms of a system of responsibility for production, the enthusiasm of the peasants was effectively aroused, disaster damage was reduced, and a fairly decent harvest was won after all. In order to have a good distribution even in a year of great disasters, with the peasants gaining material benefits, leadership comrades in prefectures, counties, and communes gave great attention to year end distribution work, personally conducting tests at selected points, investigating and studying to increase by any manner of means the distribution capacities of communes and brigades, and to organize to carry out distributions. The outcome of calculations was that in the basic accounting units of rural people's communes throughout the prefecture, average per capita distributions increased from the originally planned 83 yuan to 90 yuan, and 62.8 percent of all households received income. In addition to overfulfilling state requisition grain purchase quotas, a fair number of commune and brigade members had an income from collectively distributed cash and grain, plus what they received from their private plots and household sideline occupations, that totalled even more than during the great bumper harvest year of 1979. The commune member masses said that despite a reduction in the distribution figures on the ledgers, all the pots and pans in our homes are full. Some also said that 1980 was the second great disaster year since Liberation, but it was also the second bumper harvest year, and the year in which commune members' real benefits were greatest.

The main reason that most of the communes and brigades in Xianning Prefecture could have such a fine distribution situation was that every level of leadership handled the job of distributing benefits in people's communes as a very important matter,

acting on the basis of the practical situation to take actions. One such action was the return by units in state enterprises of funds owning to production teams....As a result of actions taken by authorities concerned throughout the prefecture such as retroactive payments of wages to civilian laborers on capital construction, repayment of debts, and return of interest to agriculture, industry, and commerce, commune and brigade income increased by more than 3 million yuan. In a second action, commune and brigade enterprises used sharing of profits, repayment of workforce investments, and payment of public welfare funds to disburse more than 7.8 million yuan to production teams. Third was vigorous marshalling of earnings by production teams from the more than 70,000 person labor force throughout the prefecture engaged in industrial sideline production and the "small autumn harvest," which increased the collective's earnings by 3.8 million yuan.

Hanchuan County

Wuhan HUBEI RIBAO in Chinese 10 Feb 81 p 2

[Text] The broad masses of cadres and commune members in Hanchuan County, which sustained severe innundation last year, have shown their revolutionary spirit of arduous struggle. While carrying out a self-rescue effort in production, they have also centered on increasing their capacities to combat disasters, undertaking major capital construction of farmlands to lay a foundation for winning bumper harvests in agriculture this year.

Last year more than 1 million mu of croplands were innundated in this county, on which the crops on 160,000 mu were wiped out and provided no harvest at all, bringing about a marked decline in output. This severe disaster meant not only an examination of past projects for the capital construction of farmlands, but also required full mobilization of people in the county for further capital construction of farmlands. Despite the increased capital shortage following the disaster, each jurisdication promptly layed out projects for the capital construction of farmlands following the principles of hardwork, thrift, and conservation and emphasis on practical results, and in accordance with state programs for readjustment of the national economy. Taking account of weak links revealed in ability to cope with disasters throughout the county, emphasis was placed on repairing breaches in the dikes, repairing and strengthening danger spots, and making use of potential for forming an integrated system. Diaohan Lake formerly had 64 kilometers of dikes that were less than 26.5 meters high, and last year's flood waters crested at 25.9 meters, creating alarm on several occasions. Since last winter, a workforce numbering more than 20,000 from nine communes throughout the county were organized to increase the height of the dikes by a uniform 1 meter or more in order to combat an even greater flood disaster. Every commune and brigade emphasized solution to the problem of flooding in their own areas by launching small scale capital construction of farmlands. Throughout the county, 298 water conservancy projects, large and small, employing a labor force of more than 57,000 people were undertaken. As of mid-January, more than 4.4 million cubic meters of earthworks had been completed.

Last year this county had some drainage equipment, which had not been routinely serviced or maintained, and which brokedown when called upon to pump out the water. In some cases, maximum performance was impossible because the equipment was not properly integrated. This year, as part of the determined fight against disaster, they carried out comprehensive repairs, tapping of unused potential, and integration

into a unified system of existing equipment. Thirteen of 27 large and medium size pumping stations have been repaired. Transformer equipment at five electric power transformer stations responsible for providing electric power to pump water from 70,000 mu of farmland that are located at Hongguang, Shuobei, Jangbianyan, Qijiawan, and Qinglongtai are undergoing adjustment.

Qichun County

Wuhan HUBEI RIBAO in Chinese 10 Feb 81 p 2

[Text] Leaders in Qichun County CCP Committee and government units braved winds and snow and fought extreme cold just before the lunar New Year to lead survey teams on visits to communes and production brigades to give concrete help to disaster areas and hard hit households in providing for their livelihoods, so that commune members could happily celebrate the New Year and greet the arrival of spring plowing.

Working in close coordination with the communes, these survey teams, led by leaders in party and government units, conducted surveys in 505 production brigades, or 94.1 percent of all production brigades in the county. Whenever they arrived in a place, they would have heart to heart talks with the local grassroots cadre and masses, and show solicitude about their welfare. As a result of a drop in output following last year's disaster, some commune members in the Sunshan Brigade of Sunchong Commune were really up against it. The County CCP Committee survey team immediately held discussions with the grain authorities for prompt delivery of grain to this brigade, insuring that each commune member would have no less than 40 jin of grain per month. The secretary of the County CCP Committee, Zhou Bochen [0719 0130 6591] conducted a survey in the surrounding mountain areas, discovering that numerous commune members in disaster stricken communes there were wearing summer clothing in the severe winter season, and that some of their clothes were even in tatters making them feel very much ashamed. After returning to the county, he reported at once to the Standing Committee of the CCP Committee, studied ways to solve the problem, and personally took the lead in donating 23 pieces of clothing.

Thanks to the solicitude of the leadership the problem of hardship brigades and hardship households were substantially solved. Before New Years, 20,000 jin of grain for consumption of commune members was delivered to the 1,198 production teams who were short of grain, and this was distributed to teams and households. In addition, the county alloted relief funds of 320,000 yuan, provided cotton wadding for 650 quilts, and 2,300 suits of wadded clothes to keep out the cold. Additionally, cadres and employees in cities and towns voluntarily donated 3,600 pieces of clothing. Now these funds and materials have been put into the hands of commune members in hardship households.

Gongan County

Wuhen HUBEI RIBAO in Chinese 1 Feb 81 p 1

[Text] As the New Year approached, the Gongan County CCP Committee and County People's Government organized large numbers of cadres to lead teams from every echelon of leadership into disaster areas to conduct an all around investigation of the masses' living conditions. When problems were found, they were resolved on the spot as part of making sure that the people in the disaster areas would celebrate a happy New Year.

In order to insure that the masses in disaster areas would have a happy New Year in a year of disaster, the Gongan County CCP Committee and People's Government recently organized comrades in charge at all echelons to lead cadres to communes and brigades

In order to insure that the masses in disaster areas would have a happy New Year in a year of disaster, the Gongan County CCP Committee and People's Government recently organized comrades in charge at all echelons to lead cadres to communes and brigades in disaster areas where stress was placed on the livelihood of commune members at New Year's time in brigade by brigade and household by household surveys. They used the approach of first taking a look, second making inquires, and third holding discussions to check on 1,345 production teams in 423 production brigades, visiting more than 16,000 hard hit households. When the survey turned up problems, they were solved at once at the grassroots level. Comrades Zhang Dakun [1728 1129 0981] and Chen Zhichu [7115 1807 6389], deputy secretaries of the Chengtiansi Commune in an area of breached dikes discovered that the households of 150 commune members throughout the county had no way to keep the cold out of their houses. He immediately organized a workforce to make rush repairs on their houses. Within 2 days, 133 houses had been restored. Comrade Wu Xiandong [0702 0341 2767], secretary of the Nauping Commune CCP Committee made a thoroughgoing visit of severely stricken disaster areas. He helped especially hard hit households with 696 pieces of clothing, 450 cotton quilts, 17,500 yuan in relief funds, and 110,000 jin of grain. Comrade Shi Changshou [2457 2490 1108], secretary of the Nanzha Commune CCP Committee went to Beigeng, which had been seriously flooded, where he promptly solved for the 7th Production Team of the Beigeng Production Brigade its problems in the purchase and supply of grain, meat to eat at New Year's time and relief funds totaling more than 560 yuan. More than 300 people in Nahaokou Commune lacked winter clothing. After a check, 2,000 yuan in relief funds were promptly issued, plus cloth coupons for 3,000 chi of cloth. Additionally, help was given for rush making and release of 200 suits of clothing. At the Tongyi Production Brigade in Jinshi Commune, orphan Xu Xiaoping [1776 1420 1627] had a life of hardship. He had no food, clothing, shoes, or stockings. After CCP Committee secretary, Comrade Yu Wenjin [0151 2429 6855] discovered this, he solved the problems with 150 jin of grain, the rush making of a suit of winter clothing, the purchase of a pair of cotton stockings, and arrangements for someone to look after him. Meanwhile, the County CCP Committee and the County People's Government studied and made arrangements for the livelihood problems of the masses during February.

Honghu County

Wuhan HUBEI RIBAO in Chinese 4 Feb 81 p 2

[Text] All the superior varieties of paddy rice and cotton that Honghu County will need this year had been virtually made ready as of early January.

Last year Honghu County suffered a severe flood disaster as a result of which some communes and production brigades saw their seeds rot, or had no seeds. By way of getting stricken communes and brigades to tap potential for increased output from original varieties and hybrid varieties of seeds as part of scientific farming, and in order to rapidly restore and develop production, the County Agricultural Bureau and the grain authorities worked closely together to promptly send more than 100 cadres and workers to the stricken communes and production brigades to gain an understanding of the seed shortage situation, to sign seed supply agreements with production teams, and to arrange for their early implementation. County seed stations brought in 150 jin of superior variety rice seeds from Jingshan County and, as of the first part of January, more than 5 million jin of rice seeds and 480,000 jin of cotton seeds had been swapped around within the county to satisfy the needs of stricken communes and production brigades.

Jianli County

Wuahn HUBEI RIBAO in Chinese 4 Feb 81 p 2

[Text] Ever since last winter, the broad masses of cadres and people in Jianli County have taken firmly in hand the field care of overwintering crops in an effort to harvest a bumper crop in the summer.

As a result of flood diversion, and ruptured dikes in this county last year, no harvest was reaped from 955,000 mu of farmland, and this caused definite hardships for the production and the livelihood of commune members. After the disaster was over, all echelons of the party organization and governmental units throughout the county led the people of the county in making summer grain production the principal ingredient of self-help in production through timely sowing of 520 mu of grain crops and pulses, and by intensified care. Farmland that had been submerged by the flood waters had hard and impervious soil that was not good for the growing of crops. But cadres and commune members, in a departure from conventional methods, either plowed or dug up the soil with hoes, and then cultivated the growing crops once. To the 160,000 mu of poorly growing summer crops, they added chemical fertilizer and manure, and lowered the underground water table to promote normal crops growth.

9432
CSO: 4007

BRIEFS

SUI COUNTY CROPS--Sui County, Hubei, has applied fertilizer on 950,000 mu of summer grain, averaging 30 jin per mu. The county has 7.86 million jin cotton seeds ready for sowing and has applied base manure to 153,000 mu of land. [Wuhan Hubei Provincial Service in Mandarin 1100 GMT 5 Mar 81]

CSO: 4007

BRIEFS

ANHUA COUNTY AFFORESTATION--At the end of February, Anhua County, Hunan, had afforested more than 84,000 mu of land, accounting for 80 percent of the plan. [Changsha Hunan Provincial Service in Mandarin 2315 GMT 5 Mar 81]

CSO: 4007

JIANGSU HOLDS WORK CONFERENCE ON RURAL COMMUNE MANAGEMENT

Nanjing XINHUA RIBAO in Chinese 22 Jan 81 p 1

[Article by XINHUA RIBAO correspondent: "Provincial Government Holds Work Conference on the Operation and Management of Rural Communes Throughout the Province To Implement Readjustment Policies and Strengthen Agricultural Production Responsibility System"]

[Text] To strengthen and perfect the responsibility system in agricultural production and to further arouse the enthusiasm of the broad masses of commune members and basic-level cadres, the Provincial People's Government recently held a work conference on the operation and management of rural people's communes throughout the province.

Comrade Xu Jiatun [6079 1367 1470] attended and spoke at the conference.

Excellent Situation in the Countryside of the Province

The meeting recognized the excellent situation in the countryside of the province. Along with the development of productive forces, the living conditions of most peasants have gradually improved. In 1978, grain output increased by 9 billion jin; in 1979, it was further increased by 3 billion jin. The natural disasters in 1980 were no less severe than those of 1977; yet, with the exception of cotton, we generally had the third bumper harvest year since the founding of the People's Republic. The per capita income from distribution for the commune members in the province was 75 yuan in 1977; 94 yuan in 1978; and 110 yuan in 1979. Because of reduced production in 1980 as a result of natural disasters, the average income from collective distributions for each commune member was still around 100 yuan. Last year's rainfall was close to that of 1954. Although the lack of sunlight and the low temperature were unparalleled in the past 60 years, our harvests could still be what they were in 1980 only because of the implementation of the principles and policies of the Third Plenary Session of the 11th Party Central Committee for developing agriculture, and the spirit of hard struggle displayed by the broad masses of basic level cadres and commune members. These were hard-won victories.

Readjustment and Consolidation of Commune- and Production Brigade-run Industries

The participants at the meeting pointed out that the implementation of the decision policies of the authorities stressing readjustment is a very important issue. In

agricultural readjustment, there should first be a readjustment of policies, and then the readjustment of the rural economic structure, particularly the readjustment and consolidation of commune- and production brigade-run industries. The development of such industries in our province has been in the main a success. In 1980, the total output value of commune- and production brigade-run industries was over 10 billion yuan, which yielded a profit of 1.5 billion vuan and provided another 1.5 billion for the wage fund and 500 million yuan as income tax, besides creating jobs for 3.5 billion able-bodied persons in the countryside.. First, the matter of capital construction projects undertaken for these industries should be immediately taken up and suitably dealt with. Secondly, there are huge product stockpiles in the enterprises at present. If these products cannot be sold, these enterprises should quickly change their lines of production. Thirdly, the integration of commune- and production brigade-run industries with large city industries should be encouraged in respect of technology, spare parts and accessories and other products, so as to promote specialized production. Fourthly, great efforts should be made in increasing the varieties and improving the quality of products. If at all possible, more low-price and good-quality commodities which can be easily sold in the market should be produced. This will help balance supply and demand and stabilize the prices. Fifthly, as the orientation for developing commune- and production brigade-run industries hereafter, we should direct our main efforts in planting and breeding. Provided the sale of agricultural and sideline products to the state has been completed, the remaining products can be used for developing primary processing industry. At the same time, the commune- and production brigade-run industries should do their best to fill certain gaps left by the large industries. Sixthly, the relationship between industrial and agricultural commune members should be readjusted so that there will be no undue differences between the remunerations of commune members engaged in agriculture, sideline occupation and industry.

Setting Right the Relationship Between Grain and Cash Crops

The meeting held that in readjusting the internal structure of agriculture, the relationship between grain and cash crops should be first set right. Many areas want to develop cash crops, and this sounds quite reasonable. Yet, in consideration of the overall situation, the question of grain is a very important one. The situation in the countryside of Jiangsu has been fairly stable in the past several years because of the continued growth of the national economy. A very important factor of this fine situation is the superiority of grain production. In improving the internal structure of agriculture in the past several years, various localities have readjusted the ration between grain- and cash crop-growing, and the action taken was quite forceful. It is certainly not true that cash crops cannot be developed hereafter; however, in view of the overall situation in the province, cash crops must not squeeze into the grain-growing areas. In growing grain, the peasants have a heavy responsibility and are making great contributions. This is particularly true of the peasants in the Taihu area. However, this problem can only be solved gradually instead of immediately. Suitable readjustments should be permitted in those communes and production brigades where the proportion of land taken up by the three-crop system is excessive, but the readjustment should not involve the transfer of too much land. There are many ways to solve this problem. In short, grain production should be of primary importance and the problem of food must not be taken lightly.

One of the most important aspects in agricultural readjustment is the reduction of the scope of capital construction. In the next 2 or 3 years, farmland capital construction and irrigation should be undertaken within the limits of capability and confined to the strengthening of flood prevention facilities and small auxiliary projects of farmland irrigation.

Strengthen and Perfect the Production Responsibility System

The participants at the meeting seriously discussed the problem of strengthening and perfecting the production responsibility system. They held that the general spirit of the central authorities' document on strengthening and perfecting the production responsibility system was to consolidate and develop the collective economy and the present excellent situation in the countryside, to further develop the agricultural productive forces, to enrich the rural economy, to improve people's living conditions, and to gradually accomplish the socialist modernization of agriculture. The following five points were stressed.

1. Collective economy is the unshakable foundation of our agricultural modernization.

2. At present, the improvement of operation and management and the strengthening of the production responsibility system should be regarded as the central link in further consolidating the collective economy and developing agricultural production.

3. Any form of responsibility system that can help encourage the producers to show maximum concern for collective production and to increase output, income and commodities is good and useful, and should therefore be supported. We should not use a single method to solve all problems simply because of some set pattern.

4. Setting output quotas for the households should be handled carefully. There are three different types of output quotas for households. One is the quota for the output of certain collective work or farming for individual laborers or households individually or jointly on a contract basis. Both types are based on the collective economy, either entirely or basically. The third type is for the land to be divided among the households regardless of the "five unities." In other words, this is individual farming. Therefore, we cannot interpret setting output quotas for households simply as dividing the land for individual farming.

The meeting called on various localities to strengthen and perfect the system of responsibility for agricultural production and to provide different types of guidance according to the present level of production, the cadres' experiences and the masses' requirements, after gaining a deeper insight into the situation by conscientiously studying the central authorities' document.

1. The system of responsibility for special jobs with pay according to output should be actively practiced in most of the areas in southern Jiangsu and in some areas along the banks of Changjiang River.

2. In the communes and production brigades of mainly grain- or cotton-growing areas, the system of setting output quotas for individual labors with pay according to the

output can be considered in collective farming and field management. Also in view of the different characteristics of grain- and cotton-growing, the systems of organizing production groups with contracted responsibility, assigning small plots on a contract basis, and paying according to the targets in output or value, can be practiced according to the size of the production team in mainly grain-growing areas. As for areas used mainly for growing cotton, production groups, individuals or households can be organized with contracted responsibility. This system will be gradually replaced by that of responsibility for special jobs with pay according to output, along with the increase in the number of diversified undertakings.

3. There are many basically self-sufficient communes and production brigades with backward commodity production, that is, the communes and production brigades of mediocre economic and management ratings. Our efforts in improving these communes and production brigades will have a close bearing on the stability of the overall situation in the countryside. We should direct our attention to both operation and management, and while improving grain production, we should strive to develop multiple undertaking. We should exert even greater efforts in consolidating and developing the collective economy, and combine the superiority of collective economy with the superiority of the commune members' enthusiasm in collective production, so that the economy of these mediocre communes and production brigades will be gradually strengthened.

For the areas and production teams with long-standing difficulties, many different measures, including the relaxation of policies, should be adopted to reduce their burden and to give them the necessary support. In operation and management, the first thing to do is to guide them in practicing the system of responsibility for special jobs with pay according to the output. When their grain output has increased, they can then grow more cash crops and set output quotas for individual laborers and households with better benefits for the commune members concerned. Secondly, output quota for households should not be set for all crops, unless the masses so insist. Thirdly, in setting up this type of output quotas for households, both the production team and the commune members have their own obligations. The production team should provide more active leadership and advise the households as to how to fulfill the quotas, how to distribute the proceeds and how to take care of the army dependents, dependents of martyrs, the households enjoying the five guarantees, and the households in financial difficulty. There should be specific regulations for all these jobs. In short, in implementing the responsibility system, we must proceed from realities, adapt measures to local conditions, proceed along methodically and be meticulous in our work. Only thus can this work be done well.

The meeting pointed out that from now on and until the busy season of spring plowing, implementation of the spirit of the Work Conference of the Party Central Committee has to be the main concern. At the same time, in accordance with the spirit of the central authorities' document on strengthening and perfecting the production responsibility system, the cadres should be encouraged to continue their study, and to carry out winter training and experiments periodically and in separate groups in order that the responsibility system could be strengthened and perfected. It is also necessary for spring plowing to be well-organized, and for the over-winter

crops to be well protected. The accumulation of fertilizer and production of chemical fertilizers on a small scale should also be carefully attended to. It is particularly important that the year-end distribution be neatly wound up so as to insure that the commune members get all they are entitled to. A general survey should be conducted on the commune members' living conditions and due arrangements made for each family. This is particularly necessary for the communes and production brigades where outputs have been reduced because of natural disasters. Every effort must be made to solve these commune members' problems of livelihood and thus to further promote stability and unity in the countryside so that everyone will work whole-heartedly to boost their production.

9411
CSO: 4007

BRIEFS

HUAIYIN PREFECTURE AFFORESTATION--Jiangsu' Huaiyin Prefecture planted 85,000 mu of forests, 18,000 mu of mulberry trees and 1.5 million mu of shelter trees around farmlands last month. The total number of trees planted has exceeded that of the entire past year. [OW102353 Nanjing Jiangsu Provincial Service in Mandarin 2300 GMT 8 Mar 81]

CSO: 4007

BRIEFS

FOREST POLICE SUBSTATIONS--The Jiangxi Provincial People's Government recently approved the restoration and estab'ishment of forest police substations in key forests zones in order to maintain security in the forests, protect resources and develop production in forestry. At present, there are 56 forest police substations with 400 cadres and policemen throughout the province. The provincial public security department, the provincial agriculture and forestry department and the land reclamation bureau have intensified their efforts to build new forest police substations. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 7 Mar 81]

ARMY CIRCULAR--Recently the Jiangxi Provincial Military District's political department issued a circular urging all armymen and militiamen to take immediate action to help localities in spring farming and afforestation. All army units are called upon to implement the guidelines of the circular of the Provincial CCP Committee and people's government and the Fuzhou military region's political department on supporting spring farming, and help local communes and brigades transport materials for production, repair farm machinery, prevent and treat illnesses, and perfect the various forms of production responsibility systems. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 7 Mar 81]

FORESTRY SCIENCE--The Jiangxi Provincial Conference on forestry science and technology was recently held in Nanchang. Some 200 persons attended, including administrative personnel from the agriculture, forestry and land reclamation bureaus at provincial, prefecture, city and county levels and scientists and technologists from the provincial Forestry Research Institute. Speeches were delivered by Vice Governor Zhang Guozhen, (Wen Hanguang), head of the provincial scientific and technological committee, and Deputy Director (Liu Zhichao) of the provincial (?agricultural) committee. After discussing various shortcomings in forestry management, the meeting decided to establish specialized forestry research centers in different localities in accordance wi h their natural conditions. In readjusting forestry research work, shortcomings and defects such as overstaffing, personnel dispersion and overlapping research projects should be surmounted. [OW130051 Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 9 Mar 81]

CSO: 4007

BRIEFS

FARMING TELEPHONE CONFERENCE--The Qinghai Provincial CCP Committee and the Provincial Government convened a telephone conference on the evening of 23 February calling on cadres and masses in farming and livestock breeding areas across the province to lose no time in combating drought to ensure success in spring farming work. The conference pointed out that there are signs of drought in most parts of rural areas and many localities have yet to thoroughly implement the system of responsibility in production. The conference called on the various localities to make continued efforts to implement the line, principles and policies defined at the Third Plenary Session of the Party Central Committee, improve the work style of leadership and stress the production of grains while not ignoring the production of cash crops as well as the work of diversifying the economy. [SK260320 Xining Qinghai Provincial Service in Mandarin 2330 GMT 23 Feb 81]

CSO: 4007

LUONAN COUNTY INCREASES GRAIN OUTPUT BY 20 MILLION JIN

Beijing RENMIN RIBAO in Chinese 14 Jan 81 p 2

[Article: "Because Each Policy Mobilized the Enthusiasm of the Peasants and Because of the Great Affect of Implementing Scientific Farming, In the Last Four Years, Luonan County Annually Increased Its Production of Grain by 20 Million Jin"]

[Text] NCNA dispatch from Xian, 13 January, NCNA reporter Wang Huangyan [3769 3552 1750] reports: Luonan County in Shaanxi Province has earnestly implemented government policy and has practiced scientific farming so that grain production in the county has continuously increased for four years. In 1977, the county produced 217.98 million jin, which was a 14.3 percent increase over the previous year; in 1978, being victorious over a drought, the total grain production for the county was 227.94 million jin; in 1979, it rose to 265.94 million jin; and last year, the county's total grain production was 280 million jin. During these four years the average annual increase in grain production was over 20 million jin.

During 10 disastrous years, Luonan County's collective economy was disrupted; these were successive years of population outflow. As late as the first new year festival following the smashing of the "gang of four," there was still a considerable exodus of population. The Central Committee of the Communist Party in Luonan County on the one hand organized everyone to criticize the criminal conduct of the "gang of four" and on the other hand to investigate their own work. Numerous cadre went deep into the villages to take hold of agricultural production along with the masses. The broad masses raised many important ideas with these cadre, helping the county committee to discover methods to cure Luonan's poverty and backwardness.

One, they examined again and rectified the false accusations, lies and misjudged cases made during the "four purities" and the "great proletarian cultural revolution" movements. After the Third Plenum of the Eleventh Party Congress, they quickly redressed the injustices inflicted in 93.4 percent of the cases involving basic level cadre or national workers, and changed the status of 99.8 percent of the people incorrectly classified as landlords or rich peasants.

Two, they actively implemented and carried out the party's economic policies in the villages. In 1977, they reduced over 11,000 personnel who were not productive and strengthened the first line of agricultural production. At the beginning of 1978, they also proposed to establish a system of production responsibility that sought to help the dispersed residents of the comparatively large production brigades in mountainous and riverine areas. Under unified plan, financial management, and the

distribution of profits, they established year-round work groups with fixed output, fixed labor use, and fixed rewards. After trying it out, this responsibility system was very well received and very quickly 77 percent of the county's production brigades were using it. Moreover, the system was used in many types of management and farmland capital construction. At present, many types production responsibility systems such as "three fixes, one reward," linking production with labor and contracting labor for a small part of the job have already been established everywhere throughout the county: This not only promoted grain production but, moreover, promoted a very great development in forestry, livestock, and sideline production. By the end of October of last year, the many types of income in the county reached in excess of 23 million yuan, for a 20 percent increase over 1979.

Third, there was the movement to develop vigorously scientific farming. In recent years, the benefits to increased production of their gradual expansion of interplanting and companion cropping have been obvious. They also emphasized the cultivation and expansion of improved crop varieties, emphasized fertilizers, and the construction of irrigation works for farming. These scientific farming measures were very effective in agricultural production.

9504
CSO: 4007

BRIEFS

YANAN PREFECTURE OIL-BEARING CROPS--In 1980, the people in Yanan Prefecture reaped a total of 11.18 million jin of oil-bearing crops. This was an increase of 47 percent over 1979 and the highest level ever recorded. By the end of January, 1.65 million jin of edible oil have been purchased throughout the prefecture, overfulfilling the task by 27 percent. At the same time, 4.04 million jin of industrial oil have also been purchased, surpassing the purchase plans by 250 percent. [Xian Shaanxi Provincial Service in Mandarin 2300 GMT 2 Mar 81]

CSO: 4007

GRAIN, EDIBLE OIL PRICES STABILIZED

Jinan DAZHONG RIBAO in Chinese 17 Dec 80 p 1

[Article: "Stabilization of Grain and Oil Prices and Steadying of the People's Livelihood; Provincial Grain Department Notifies All Jurisdictions To Adopt Firm Measures"]

[Text] On 25 December, the Provincial Grain Department issued a notice to all jurisdictions requiring grain units on all levels to assiduously and thoroughly carry out the State Council's, "Circular On Strict Control of Prices and Restructuring of Negotiated Prices" and to take firm action to stabilize grain and oil prices, and to steady the people's livelihood.

The notice required: 1. Uniform market prices for grain and oil, to be carried out without exception in accordance with state regulations. Planned supply grain and oil must maintain consistent quality; any that does not meet quality standards is not to leave the plant (or warehouse). If because of defects in raw materials, grain and oil products cannot reach nationally prescribed standards even after efforts to attain them have been made, they may be sold at reduced prices temporarily following discussion of prices to be set in accordance with quality by the municipal grain bureaus in each jurisdiction, with the concurrence of the Provincial Price Control Bureau and the Provincial Grain Department. Those who attempt to disguise inferior quality to increase the price will be held responsible and severely dealt with. 2. Negotiated purchases of grain and oil must be done only after production teams have fulfilled state requisition purchase plans for the year. Negotiated purchase prices must be strictly held within the highest price limits set by the province. Negotiated market prices of grain and oil must, without exception, be set in accordance with the prices as of 7 December 1980. They may only be lowered but not raised. 3. All prepared grain foods and all reprocessed grains sold by any grassroots level grain unit, and everything supplied against a grain coupon may not bear a price higher than the price set by the state for similar goods from the food and beverage industry, nor may they be lower in quality than that set for similar items from the food and beverage industry. Sale of spoiled grain or oil, reprocessed grain products or prepared foods is strictly forbidden. 4. Need to strengthen care of weighing apparatus to maintain its accuracy to make sure of full weights. 5. The prices charged for industrial commodities from the grain system when they market them themselves shall be under the control of the province and above, and shall be put into effect in accordance with prices sent down by the province. Unauthorized increases in prices will not be allowed. Commodities under the control of jurisdictions below the province level

should also be sensibly readjusted when the market price is higher than the set price. 6. Standards for fees to be collected for grains and oils processed by the masses should be set in accordance with the principle of preservation of capital plus a small profit. Charges that tend to be high should be reduced. A sensible commodity rate should also be set; pocketing of a portion of the masses grain and oil will not be permitted. Reprocessed foodstuffs and prepared foods that require grain purchase certificates and for which varieties are proportionately supplied should have a reasonable processing fee collected for them, which may not be higher that the standard charges of the same industries locally.

9432
CSO: 4007

BRIEFS

ANTI-DROUGHT MEETING--The Shandong Provincial Water Conservancy Office recently held a provincial meeting on drought combating and spring irrigation in Jinan Municipality. Since last winter, rainfall has been rare in the province. Some 20 million mu of farmlands have been striken by drought. To make matters worse, the drought will become more serious in the next 3 months. Therefore, the meeting called on peasants to take immediate action and make the most of water conservancy work to combat drought to protect wheat plowing and spring plowing. The meeting also urged peasants to try in every possible way to irrigate 35 million mu to 40 million mu of wheatfields. [SK102225 Jinan Shandong Provincial Service in Mandarin 2300 GMT 9 Mar 81]

CSO: 4007

PROBLEMS IN AGRICULTURAL MODERNIZATION OF JIADING COUNTY INVESTIGATED

Shanghai FUDAN XUEBAO (SHEHUI KEXUE BAN) [FUDAN JOURNAL (SOCIAL SCIENCE EDITION)] in Chinese No 1, 20 Jan 81 pp 101-107

[Article by Wang Kezhong [3769 0460 1813]: "Investigation of Problems in the Agricultural Modernization of Jiading County"]

[Text] (1) Accomplishments and Problems

Jiading County is situated on the fertile Yangtze River Delta near China's largest industrial city, Shanghai. It is a suburban county of Shanghai. Since the time of the collectivization of agriculture, in its journey toward the modernization of agriculture, Jiading County has made definite accomplishments to lay a fine foundation. This county has brought virtually all of its farmland under irrigation, has mechanized cultivation, irrigation, and processing of agricultural byproducts, and has mechanized or semi-mechanized plant protection, threshing, and medium and long distance transportation. As of the end of 1979, the county had 212,030 horsepower of mechanized farm equipment of various kinds for an average 47 horsepower per 100 mu of cultivated land, which was more than three times the average national figure, and double the figure for West Germany. It had 692 large and medium size tractors for an average 15.4 per 10,000 mu, which was more than three times the national average and close to the level of the United States. The county has spent a total of 80,336,000 yuan for investments in water conservancy or an average 178 yuan per mu. Investment for mechanization has been 87,758,000 yuan, for an average 195 yuan per mu of cultivated land. The two items total 168.09 million yuan, or an average of 373 yuan per mu of cultivated land.

The above mentioned accomplishments in the modernization of agriculture have increased capabilities for combating calamities, have lightened the intensity of labor, have emancipated a large part of the labor force, have increased the rate of labor productivity, and have promoted the overall development of agriculture, forestry, livestock raising, sideline enterprises, fisheries, and commune and brigade operated industries. Calculations made from a representative sampling show that as a result of increases in the degree of intensiveness and the multiple cropping index, the countrywide average quantity of labor used in agriculture rose from 36 workers in 1957 to 106 workers in 1979 for an almost twofold increase. In 1957, the agricultural labor force inclusive of forestry, livestock raising, sideline occupations, and fisheries numbered 129,000 people. Had it not been for the modernization and mechanization of agriculture, it would have increased to more than 200,000. That is to say that had all of the almost 130,000 natural increase in the labor force

over the past more than 20 years been used in agriculture, it still would not have been enough. In fact, however, the labor force engaged in agriculture (farming) throughout the country in 1979 increased by only somewhat more than 25,000 people over 1957, while the remaining more than 97,000 members of the labor force were emancipated for industrial and sideline industry production. Great increases have occurred in both the rate of soil productivity and the rate of labor productivity. In a comparison of 1957 with 1979, output value per mu of cultivated land rose from 91.8 yuan to 504.60 yuan, and the output value per unit of labor (including forestry, livestock raising, sideline occupations, and fisheries) rose from 358.70 yuan to 1292.10 yuan. In 1979, grain yields (annual average) averaged 1666 jin per mu; for cotton it was 112.2 jin, for rape 237 jin, and for vegetables 112 dan. Gross earnings from agricultural sideline industry was 500.11 million yuan (of which 111,311,000 yuan came from sideline occupations and 272,770,000 yuan came from industries), and net earnings were 239,140,000 yuan, for increases over 1965 of 3.37 fold and 2.27 fold respectively. Commune member distributions (at three levels) averaged 320.56 yuan per year, or an average 500.73 yuan for each laborer for a 1.1 fold and 0.7 fold increase respectively over 1965, and 2.72 fold higher than the national distribution average, which gives preliminary evidence of the potency of the modernization of agriculture.

When the aforestated accomplishments are compared with requirements for the modernization of agriculture, and with the needs of national economic development, a great gap remains. The most prominent problems are the following ones.

First, neglect of the modernization of production techniques. The targets of agricultural production are living organisms, and some of the products of agricultural production enter into the process of further production in the natural course of events. Thus, improvement in biological varieties, improving and creating good conditions and an environment for biological growth, and such modernizations of production technicques have particularly great direct significance for agriculture. Moreover, this important aspect of agricultural modernization is characterized by small investment for great results. However, for a long period of time in Jiading County, and particularly during the period of rampage of the "gang of four," virtually no progress was made, or there was actual regression in some cases, in improvements of biological varieties, soil improvement, scientific farming and livestock raising techniques, use of compound fertilizers, and herbicides. No one can say in just what era or just what stage the cultivated land became worse the longer it was cultivated, or when the seeds became severely mixed with other strains and degenerated.

Second, neglect of the building of field water conservancy systems. Practice has shown that in areas with river networks, field water conservancy, including control over subterranean water tables, determines to a great extent, output per unit of area. However, in the past attention has gone to the control of and mechanized irrigation from main rivers, while control of watercourses in communes and brigades and the building of field water conservancy systems has not kept up correspondingly, and virtually nothing has been done to solve the problem of lowering or controlling the underground water table. In quite a few prefectures severe damage from "waterlogging" prevents improvements in the soil or further increases in per unit yields.

Third, neglect of rationalization of the production structure. The building of a structure for production that can make fullest use of natural resources, combines

use of the soil with the nurture of the soil, that has quite high levels of specialization and regionalization, and offers optimum economic benefits is yet another important ingredient in the modernization of agriculture. The production structure in Jiading County has its rational side, but the principal current problem is the one-sided emphasis on grain production. During the mid-1970's, in particular, a three crop system of two wetland crops and one dryland crop for grain was pursued in a change from the former fairly rational traditional farming system that rotated wet and dry crops. This structure is not suited to the "weather or the land" of Jiading. Since the growth period for three crops is about 420 to 430 days, 420 days work has to be done in the 365 days of the year. Preparation of the soil from which a crop has just been harvested is frenetic in a noticeable clashing of seasons. Because of a reduction in the crop area for green manure and pulses, the soil is sopping wet for a protracted length of time, making for an imbalance in the soil's water, oxygen, air, and heat and a hardening that worsens soil quality gradually. Because seedlings are in the fields continuously from early spring until late fall, one generation of diseases and insect pests overlaps another, with one outbreak followed by another. Such a structure does not make economic sense either. It is of no benefit for the overall development of agriculture, forestry, livestock raising, sideline occupations, and fisheries, nor does it favor taking full advantage of the growing of traditional economic crops such as garlic, and cotton. Agricultural costs have risen dramatically, and increased output has not been accompanied by increased income but rather sometimes by reduced income, and meanwhile the ecological system for agriculture has tended to decline.

Fourth, neglect of economic benefits derived from investments in mechanization. Benefits from investment in mechanization of agriculture have shown a tendency toward decline. On the one hand, the speed of increase in net income from grain has been vastly lower than the speed of development of agricultural modernization (See Table 1). On the other hand, agricultural production expenses have increased rapidly while economic benefits of agricultural investments have declined (See Table 2).

Table 1. Comparison of Speed of Development of Agricultural Modernization and Speed of Growth in Net Income from Grain

Year	1970	1979
Description		
Percentage increase in mechanized power per mu of cultivated land	100	291
Percentage of increase in use of electricity for irrigation per mu of cultivated land	100	182
Percentage increase in applications of chemical fertilizer per mu of cultivated land	100	194.75
Percentage increase in total grain output	100	120
Percentage increase in net income per mu of cultivated land	100	141

Table 2. Comparison of Expenditure and Recovery for Agricultural Production

Description \ Year	1965	1976	1949
Expenditures for agriculture as a proportional percentage of agricultural income	28.1	35.3	31.2
Production expenses per mu of cultivated land (yuan)	28.00	76.34	76.58
Expenditures for production of each 100 jin of wheat (yuan)	4.66	5.29	5.13
Expenditures for production of each 100 jin of cotton (ginned) (yuan)	17.96	31.49	26.72
Expenditures for production of each 100 jin of rape seeds grown	8.33	17.51	13.69
Number of yuan recovered for every yuan expended for agriculture	3.56	2.60	3.28

Note: Expenditures per 100 jin for wheat, cotton, and rape seed production as reported in representative investigations.

There are three work related reasons that have brought about the above state of affairs apart from the disturbances and destruction caused by Lin Biao and the "gang of four." One is the low level of administration and management of farm machines. The management system is incomplete with no conscientious implementation of either an economic accounting system or a system of rewards and penalties. Both the farm machinery in-service rate and the use rate are low, losses are great, and petroleum consumption is high. When the in-service rate for medium size tractors averages 85 percent, quantity of work per horsepower is 191 mu. Costs for six items per standard mu are 0.793 yuan and petroleum consumption per standard mu is 0.484 kilograms, which is a very great difference from the situation in advanced units such as those at Fengbin and Jiangqiao. If management levels could be increased, so as to effect a five-percent increase the in-service rate for medium size and hand-operated tractors, all the other economic and technical criteria would meet or be close to the levels of the advanced units. The annual increase in income and savings in expenses could amount to several million yuan. Second is irrational systems for the production and supply of farm machines, and scarce and poor quality equipment for farm machines. In advanced foreign countries, there are between 100 and 200 attachments for use with tractors, but China has only "two pieces and a half." Moreover, thanks to the "consistency" of the past 20 years, not much progress has been made. It is still a situation of two-wheel drive, little hydraulic machinery, and few gear positions. Even if there were more attachments available, they could not be hooked up. A single machine does not have multiple uses, and is incapable of multiple operations. Farm machinery quality is an even more pronounced problem. Because of design flaws, or because original materials or manufacturing quality were not up to the mark,

since 1971 18 different machines throughout the county have had to be junked or be put aside and not used at a cost of 11.78 million yuan or 13.4 percent the investment in mechanization. The farm machinery repair expenses for the county since 1979 (including the purchase of small farm implements) has amounted to 3.15 million yuan or 9.2 percent of production costs, and a 2.3 fold increase over the 1960's. The farmers say, "when farm machines are lacking, we hoped for them, but now that we have the machines, we worry about repairs, which we really cannot afford to pay for." Third, the farming system is not sensible, and there are too many changes in farming methods. The triple cropping system for grain, and the intercropping of cotton with wheat, and such farming systems increase difficulties for the mechanization of field operations and make for an extraordinary compressing of the seasons, thereby both limiting the "room for maneuver" of the machines and entailing large increases in the numbers of machines. The numerous changes in farming techniques have intensified the above conflicts, making some machines redundant shortly after they have been put into use. Fourth is the mentality and work style of blind direction and resort to coercion and commandism on the part of some leaders. Some farm machines that have not undergone testing and finalization of design, are put into mass production by administrative fiat, and are coercively promoted in a headlong rush into precipitate section with no consideration whatsoever being given to benefits, and no calculation of costs or waste of the wealth of the workers. One cannot help but say that this is a major reason for their failure.

(2) Tentative Conceptions About Fundamental Modernization of Agriculture

In the modernization of agriculture, just what is it that is to be "-ized?" And how is it to be "-ized?" In the theoretical field, contention is rife. On the basis of the experience of Jiading County, agricultural modernization means gradual reform of agricultural techniques and the use of modern industry, modern agricultural science and technology, and management science to equip agriculture. But inasmuch as agricultural production is an extremely complex matter subject to the influence of diverse factors, the basic ingredients in the modernization of agriculture are the modernization of the conditions of production, the tools of production, the techniques of production, the structure for production, and the management of production for the gradual building of a production structure that can make full use of natural resources, a technological system for consistently high output, and a rational ecological system. These several aspects are mutually complementary and indispensable to each other. The problem in the modernization of Jiading County's agriculture is one of lopsidedness among these several aspects, as, for example, the substitution of mechanization for the modernization of agriculture, making mechanization the sole ingredient in the modernization of agriculture etc. China is a land in which the press of population on the land is great, where the foundation is weak to begin with, where the level of development of industry, transportation and communications, and agriculture is fairly low, where culture, science and technology are backward, where peasant earnings are not high, and where ability to accumulate is very low. Therefore China must travel a Chinese style road in the modernization of agriculture. At the same time, however, China is a vast land in which the topography of every province (or municipality), prefecture, and county, the soil quality, the quantity of precipitation, the accumulated temperatures and such natural conditions as well as the types of crops, and systems and methods of cultivation are almost infinitely varied. Consequently no matter whether in the "content" of "-ization," the "emphasis," the "priorities," or the "methods" or "steps," China must begin with its own "realities," and must adapt general methods

to specific places, times, and crops; it positively cannot "cut everything with a single knife," or "rush headlong into precipitate action." In the past, Jiading County has had to swallow bitter pills that did not derive from the "realities" of Jiading. Jiading County has a reasonable high level of industrial and agricultural production; it has a rather broadly diversified and developed commune and brigade industry; it has some agricultural byproducts, arts and crafts, and export commodities that have enjoyed a good reputation for a long period of time; and it has a fairly high income level and accumulation capacity. It also has more than 20 years of a foundation and both negative and positive experiences in the modernization of agriculture. Our investigation shows that with good management, by 1989 or slightly longer, its agriculture can be substantially modernized to make of Jiading County an agricultural base with consistently high outputs, and a production base for non-staple foods and export goods. It can become a wealthy and cultured new socialist rural village that combines industry with agriculture and the city with the countryside. Realization of this objective entails, first, doing a good job of capital construction with the emphasis on the building of a field water conservancy system that includes facilities such as covered ditches. Second, while making the most of the potential existing farm machines and equipment afford, selectively mechanize, study and design machines that meet the most pressing current needs in agricultural production, that have the most pronounced economic effectiveness, and that are most effective in lightening the intensify of labor. Emphasis should go to solving the problem of excessive overburdening of the labor force during the busiest seasons, directing the main attack toward production of machines to replace the "three back-breaking jobs" of growing seedlings, transplanting seedlings, and harvesting by hand, drying machines, machines for hauling in the fields, tractor attachments for cultivating, ditch digging, breaking clods, and trenching, as well as certain machines for use in vegetable, livestock, sideline occupation, and fishery production. Later on, development can proceed from selective mechanization to fundamental mechanization. Third is doing a good job of modernizing the production techniques of biological varieties, plant protection, fertilizer, planting, and livestock raising to increase the level of scientific farming. Fourth is the building of a rational production structure and agricultural ecological system, and development of specialization and regionalization in agriculture. Fifth is vigorous training of production management personnel and technicians for the modernization of the management of production. Sixth is a good job of proposals from small cities and towns and major residential centers for a gradual shortening of the gaps between industry and agriculture, and between cities and the countryside for an increase in the material, cultural, and living standards of the peasantry.

A preliminary ballpark estimate of the investment that would be required to accomplish the above six items is more than 319 million yuan. With a future decline in the labor force engaged in farming to 82,000 people, a large amount of labor will be freed for the development of forestry, livestock raising, sideline, and fishery industries, for commune and brigade industries, and for other enterprises. The outlook is that by 1980 the amount of grain, cotton, and rapeseed provided by every farm worker will increase from the average 2414 jin, 94 jin, and 94 jin respectively of the 1977 - 1979 period to 4375 jin, 178 jin, and 256 jin. Output value will rise from 689 yuan to 1466 yuan, and net income will rise from 403 yuan to 1006 yuan. Output value from forestry, livestock raising, sideline occupations, fisheries, and from commune and brigade industries will also rise to 180 million and 630 million yuan respectively. With this foundation, the standard of living of the peasants will also show fairly great increase.

(3) Several Problems Urgently In Need of Solution

Attainment of the above objectives will require that vigorous action be taken now to solve the following several problems.

First, there must be across-the-board development of rural village financial resources to solve the problem of a source of funds for modernization.

Jiading County's investments in farmland irrigation and mechanization during the past 20 years and more has derived 77 percent from the three levels in communes and brigades themselves. State investment, including bank loans, comprises only 23 percent (See Table 3) in the institution of a policy of self help primarily with state assistance supplementing it.

Table 3. Sources of Funds and Use of Funds for Water Conservancy and Mechanization, 1949 - 1979. Units: Million Yuan

Description		Water Conservancy	Farm Machines	Total Figure	Percent of Total Figure
State Support	Sub-total	31.741	6.835	38.576	23
	Public Finance	31.741	2.996	34.737	20.7
	Banks	--	3.839	3.839	2.3
Commune & Brigade Contributions	Sub-total	48.595	80.923	129.518	77
	Production Teams	20.33	41.661	61.991	36.8
	Production Brigades	7.214	15.506	22.72	13.5
	Communes	21.051	23.756	44.807	26.7
Totals		80.336	87.758	168.094	100.0

Basic modernization of agriculture within the next 10 years will require an investment of more than 700 yuan per mu, or a total investment that is 1.9 times the total investment made during the past 30 years. From where will such a huge amount of funds come? In view of actual circumstances in Jiading County, they will continue to come principally from the communes and production brigades themselves, with the state giving supplementary support.

One way is an effort to develop production team agricultural sideline production to increase capacity to accumulate. For the period 1958 - 1979, production team accumulations put to use in the modernization of agriculture amounted to 62 million yuan, or 28 percent of total accumulations for the same period. Supposing an annual 4 percent incremental rate of increase during the 1980's and an accumulation rate of

10 percent, within 10 years, 230 million yuan can be accumulated. If 30 percent of this is used for the modernization of agriculture, that will provide 69 million yuan of capital.

A second way is to speed up development of commune and brigade industry for comprehensive agricultural, industrial, and commercial operations through the operation of enterprises that amalgate agriculture, industry and commerce. In the period 1958 - 1979, commune and brigade industries accumulated more than 351 million yuan, providing more than 67.5 million for the modernization of agriculture. This amounted to 19.2 percent of accumulations realized from industry and 52 percent of the funds contributed by communes and brigades. During the 1980's, commune and brigade industries will see further growth in the midst of readjustment. As a result particularly of their breaking the boundaries between systems of ownership, trades, and regions to set up all kinds of enterprises run jointly by municipalities and communes, one commune and another, communes and brigades, and one brigade and another, plus the beginning of operation of a number of enterprises for the processing of materials, for compensatory trade, and for joint capital adventures with foreign traders, development of commune and brigade industries will consequently enter a new stage of joint operations. Additionally, multiple agricultural, industrial, and commercial operations provide conditions for gradual movement toward a totality of procurement, processing, and marketing of agricultural byproducts. Supposing annual incremental growth for commune and brigade industries of 8 percent (lower than during the 1970's), and a 19 percent rate of profit, 867 million yuan of accumulations would be provided. If 25 percent of this were withdrawn for the modernization of agriculture, that would provide 215 million yuan.

A third way is to increase state investment and bank loans. The raising of funds for the modernization of agriculture requires holding to methods for the development of production and multiple agricultural, industrial and commercial operations in order to strengthen ability to be self-sufficient in capital. At the same time, however, support from state funds and loans is also indispensable. Jiading County's growth in public revenues has been very rapid. Public revenues for the past 30 years have totaled more than 1.16 billion yuan. Of the total, 118.6 million yuan was paid to the state in taxes, and this amounted to about 7 percent of total earnings from agriculture (including sideline occupations and industries). During the same period, the state used more than 38.5 million yuan for the modernization of agriculture, which was 12 percent of the revenues paid to the state treasury by the peasants. If the portion of revenues given to the state by the peasants as a result of the price scissors between industrial and agricultural goods is figured in, this proportion will become smaller. Obviously state investment in agricultural modernization has been too little. In the past when the country was not wealthy and faced numerous difficulties requiring agriculture to assist industry, the peasants were understanding. But now, the country's economic situation has greatly improved as great growth has taken place in large industries, so they should also be able to look back and use a considerable amount of strength to support the modernization of agriculture. It was pointed out earlier that a substantial growth will occur during the 1980's in agricultural sideline occupations, thereby greatly increasing revenues to the state treasury. If the tax revenues continue to amount to 7 percent of total revenues, during the 1980's the peasants will pay more than 500 million yuan in revenues to the state. Supposing a direct investment in agricultural modernization by the state of 12 percent of revenues that the peasants have paid into the national treasury, more than 62 million yuan would be thus provided. If a system were instituted whereby state investment was linked to revenues

paid by the peasants into national coffers, investment by the state would increase in the future. Of course, state investment in the modernization of agriculture is used mainly in the development of industries in support of agriculture, scientific agricultural techniques, and the training of personnel.

Bank and credit cooperative savings accounts have increased rapidly during the past 30 years, but not many loans have been made. As of the end of 1979, rural village savings for the county totaled 132,131,000 yuan, of which savings deposits from commune members accounted for 16,963,000 million yuan, but loans amounted to only 12,536,000 yuan, or only 9.2 percent of savings, and less than commune member savings at the end of the year. Loan funds used for the modernization of agriculture also did not amount to much. Of the somewhat more than 22 million yuan made in loans during 1979, only 9.2 percent was used for the modernization of agriculture. As production develops over the next 10 years, bank savings will also increase. It is estimated that by the end of 1989, savings deposits will total more than 180 million yuan, of which 26 million yuan will be commune members' savings. All that is needed is for higher bank authorities to increase the loan quotas, and increase the authority of county banks and credit cooperatives to take in more savings and make more loans, and more capital will be mobilized for the support of agricultural modernization.

Once the capital is available, it is necessary to manage it and use it well. At the present time, communes and brigades lack planning in the use of money. They use it extravagantly and the waste in investment is appalling. Take the case of Xuxing Commune, for example, which invested 6.12 million yuan in capital construction of enterprises in 1958, from which few investment benefits were received from 35 percent. The masses said, "it was only investment and no output." "Mostly it was unused machines and empty plants." Preliminary statistics show that the value of idle goods in storage and equipment in commune and brigade enterprises throughout the county amounts to 10 million yuan. Various problems in the management of capital have created an abnormal situation in many communes and brigades of "millionaires with empty hands."

Second, expand employment opportunities to find a way of solving the problem of excess labor during the modernization process.

In a situation of scant land relative to population in China, overall consideration must be given to the three links in a continuous chain of mechanization, production opportunities, and arrangements for the labor force. Only by a fundamental transformation in the situation of a "surplus" labor force, which creates anxiety about the agricultural labor force, and only when the "labor expended in the production of machines" "is less than the labor that the machines replace" can the objective requirement for use of farm machines come about.

For the past 30 years, increase in Jiading County's labor force has been accompanied by a decline in the amount of cultivated land. Comparison of 1979 with 1949 shows a 124 percent increase in the labor force and a 10.5 percent reduction in the amount of cultivated land, for an increase in the average labor density from 20.7 people to 51.8 people per mu of cultivated land. Opportunities for the labor force have become a major problem requiring solution in the modernization of agriculture.

During the process of developing farm mechanization, nearly 39 percent of Jiading County's total labor force is engaged in forestry, livestock raising, sideline

occupations, and the fishing industry, or in commune and brigade industries, the construction industry, cultural and educational, or public health work. How much additional labor force is "tied up" in agriculture (by which is meant farming)? On the basis of figures from the Malu Production Brigade of the Malu Commune where every member of the labor force is responsible for 4.1 mu of cultivated land (current provincewide average is 2.9 mu), the labor force "tied up" in farming totals more than 44,000 people. In future, as agricultural mechanization advances and the extent of mechanization goes from the present 35 to 40 percent to 70 or 80 percent in 1989, 30 percent of the labor force will be emancipated from agriculture, and this will amount to more than 32,000 people. Finally, projections from the 1960 - 1978 natural increase in population in Jiading County show that during the next 10 years an average more than 5300 people will be newly added to the labor force annually. Subtracting those entering institutions of higher learning (universities, polytechnic schools, or technical secondary schools), and those who have retired, there will be an annual net increase of more than 4400 people in the labor force, or a 10 year total of more than 44,000 people. When the three sets of figures are added together, during the next 10 years arrangements will have to be made for a labor force of 120,000 people.

Considering the natural resources and economic circumstances of Jiading County, can opportunities be found for such a labor force?

1. The rapid development of commune and brigade industries will require a large labor force. During the 1970's when commune and brigade industries in Jiading County averaged an annual 20 percent rate of growth, more than 50,000 members of the labor force were absorbed. Over the next 10 years, even greater growth in commune and brigade industries is expected to absorb about 60,000 laborers.

2. Large numbers of laborers may also be absorbed by the forestry, livestock, sideline, and fishery industries, and particularly by the labor-intensive traditional occupations that have characterized Jiading, namely, weaving of straw articles, and embroideries as well as the development of sideline occupations with milch cows, rabbits grown for their fur, the raising of huyang [3275 5017] sheep for their wool, two kinds of mushrooms, and pearls from certain kinds of clams. In 1979, output value derived from forestry, livestock raising, sideline occupations, and fisheries amounted to 92.5 million yuan and employed 21,383 people. It is esetimated that output value in 1980 will have increased to 181.9 million yuan, requiring an additional labor force of more than 20,000.

3. Construction is a trade with a great potential for development that can accommodate a large labor force. Estimates from units concerned show that during the next 10 years, the construction worker ranks will develop from the present somewhat more than 9,000 people to more than 20,000.

4. Business, especially service businesses such as the food and beverage, eatery, hotel, bath house and travel business, have all seen rapid development and have required employment of large amounts of manpower. If the 1980 population of the four county towns and 15 commune market towns increased from the present somewhat more than 96,000 to more than 200,000; this plus the gradual formation of more than 100 central residential areas for brigades, and businesses and various service trades will need to hire more than 20,000 workers, of which half will come from the rural labor force.

5. An estimated increase by more than 6000 people will take place in scientific and technical, cultural, educational, health, and athletic fields. A total of about 120,000 members of the work force will be required for these five fields. Thus, by 1989, the labor force engaged in farming will probably be about 82,000 or 27.7 percent of the total rural work force for that year.

Third, increase the investment in intelligence to hasten the training of personnel for the modernization of agriculture.

Formerly one view held that if only an outlet could be found for the excess rural manpower and the problem of a source of investment funds solved, the modernization of agriculture would be easy. This is not the case in fact. Without sufficient personnel who possess scientific and cultural knowledge, even when the equipment and the funds are available, it will not work. The cultural, scientific and technical level of the rural cadres in Jiading County do not match requirements for the modernization of agriculture. Of the 3015 principal cadre at the commune, brigade and production team levels, 38 percent are illiterate or semi-illiterate; those with a junior middle school education number 10 percent. They have experience in running mass movements and in traditional agriculture, but an overwhelming majority of them lack even a modicum of education in agricultural science and technology or possess knowledge of modern agricultural management. Before the Great Cultural Revolution, there were 198 agricultural technicians in the entire county, and now only 98 remain. Some research and work for the promotion of techniques cannot be carried on as a result. The 19 commune farm machine stations have 1,336 employees of whom only one is a technician who graduated from a secondary technical school. Less than one-half of the more than 20,000 farm machine operators have a knowledge of maintenance and repair of machinery that matches requirements. Only 12 of the 168 technical cadre on the 19 commune farm machinery stations truly possess the specialized knowledge fitting them to promote expansion of experiments. In an overwhelming majority of the production brigades and production teams, research units long ago ceased to exist except in name. Because of a lack of needed scientific and technical information about agriculture, or a lack of scientific testing methods and data, arguments frequently go on endlessly about numerous problems in the process of production, or losses result from "misdiagnosis," and numerous advanced experiences in production fail to get timely summarization or promotion. Many production accidents and much waste of materials are related to the lack of information in the ranks of the workers.

What is to be done? The state must increase investment in agricultural education, and rapidly revive, replenish and increase the former small number of institutions of higher agricultural learning, take firmly in hand reform of the rural village education system, intensify rural educational endeavors, do on the spot training that aims both at universality and at improvement as the only ways to meet objective requirements. Prior to 1966, Jiading had five schools oriented to rural villages (an agricultural middle school, an agricultural technical school, an industrial technical school, a school of finance and economics, and a school of hygiene. Of the original 15 school buildings and 3,000 students in the agricultural middle school, there are now only 24 buildings at the junior middle school level and 21 buildings that are completely for middle school use. Not a single one has any direct relationship to the modernization of agriculture. The number of senior middle school students who pass examinations to enter universities annually is less than 5 percent. Those who do not pass the examinations remain in the rural villages, but they have yet to be given any education in agricultural science and technology. Such an "education that does not meet needs" is a huge waste. It is

recommended that in the future most of the middle schools devoted entirely to middle school use be gradually converted to technical schools of one kind or another, that vigorous development be given to after-hours education, and that various kinds of short training classes be run with cadres on the job and technical cadres being rotated into them for fixed period of time. So that those who have received a scientific and technical education in agriculture will truly be used to best advantage, the existing cadre system will have to be reformed. Rural cadres should be younger and more specialized than they now are, and attention should be given to their selection from among graduates from technical secondary schools (or vocational schools) who have practical experience and a cultural background. Additionally, the irrational system whereby graduates of institutions of higher learning are assigned will have to be reformed too to insure that each year a suitable number of graduates of both institutions of higher learning and technical secondary schools are assigned to people's communes.

Fourth, make the most of the advantages of suburban counties; get more support for the modernization of agriculture from large industries and from the scientific and technical, and the educational sector.

Strictly speaking, the modernization of agriculture is a matter for the entire society (including large industries, and the scientific and technical and educational sectors). Only through widespread mobilization and organization of the power of every trade and profession in support can agriculture be modernized. Jiading County is a suburban county of Shanghai, which should take advantage of its "favored position" to get more support from large industries and from the scientific and technical, and educational sectors. It must set up a series of new and developing industries to directly serve the modernization of agriculture. These should include farm machinery industries, and low cost industries for the manufacture of pesticides of high effectiveness and low toxicity. They must organize the pertinent departments in institutions of higher learning and agricultural research units for wide-ranging use a new achievements in agricultural science by all departments in modern scientific techniques including modern biology, genetics, breeding, farming, livestock raising, pedology and agricultural chemistry to form a technical body with agricultural biology at its center, with a rational ecology as a condition, and operation of machinery as a skill that closely combines agricultural techniques and farm machines.

Only by taking firmly in hand and solidly solving the above four problems to arouse the initiative of the peasants, workers, technicians, and others can the modernization of agriculture in Jiading County be accelerated.

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JAIDING COUNTY STUDY ON COST, PRICE, VALUE OF FARM PRODUCTS

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[Article by Yao Xianguo [1202 0341 0948], Graduate Student, Economics Department: "Cost, Price, and Value of Farm Products, Report of Investigation and Calculation of Farm Costs for Jiading County"]

[Text] The cost, price, and value of farm products in directly determining the production and livelihood of the peasants are problems intimately bound up with the relations between workers and peasants, and between cities and the countryside, and the building of modernized socialist rural villages. This investigative report uses a preliminary investigation of Jiading County in Shanghai municipality to present some situations, to make some calculations, and to put forward some views.

1. Great Increase in Agricultural Costs During the 1970's

Jiading is a county with quite highly developed agricultural levels. Between 1949 and 1979, the county's total output of grain increased 1.5 fold; cotton output increased 2.89 fold; and total agricultural income increased 14.15 fold. In 1979, grain yields in the county averaged 1.666 jin per mu, exceeding the national average by 204 percent. Cotton yields averaged 112.2 jin per mu, exceeding the national average by 90.2 percent. Per capita distribution for the county's three-tier economy [production teams, production brigades, and communes] averaged 320.75 yuan, exceeding the national average more than 2.5 times.

While the county's agriculture was undergoing rapid growth, however, problems appeared when the extent of increase in costs of producing farm products exceeded the extent of growth in production, with a relative decrease in earnings ensuing. County expenses in agricultural production as a proportion of agricultural income averaged 28.1 percent during the 1960's, and rose to 33.4 percent in the 1970's. In 1977, they reached 37.7 percent. A comparison of 1970 average figures with average figures for 3 years in the 1950's (1957, 1958 and 1959) shows that agricultural income per mu rose from 94.27 yuan to 200.49 yuan for a 113 percent increase. Net income per mu rose from 65.53 yuan to 133.62 yuan for a 104 percent increase. But per mu expenditures for materials also rose from 28.75 yuan to 66.91 yuan, for a 133 percent increase. As compared with average figures for the 1960's (the 1964 figures being lacking), agricultural earnings per mu increased 42.49 yuan for an increase of 26.6 percent, and net earnings per mu increased 19.79 yuan for a 17.4 percent increase, while per mu expenses for materials rose 22.73 yuan for a 51.4

percent increase. (Note: Statistics providing 1979 expenses for materials did not include a 31,768,000 yuan depreciation expense nor a 36,163,000 yuan county, commune, and brigade subsidized production expense. Had these been included, average expenses per mu for materials that year would have increased by 13 yuan.) Expenses for materials for lesser crops also increased.

Production expenses increased rapidly, but benefits from investment were slack. Net income created from the use of each yuan spent on materials in the county averaged 2.28 yuan in the 1950's, and 2.58 yuan in the 1960's. In the 1970's, the average declined to 2.00 yuan for a 12.3 percent decline from the 1950's, and a 22.5 percent decline from the 1960's.

Still another aspect to the increase in production costs was an increase in the quantity of labor used in agriculture. The county's annual work force rose from an average 145,870.5 people in the 1950's to 201,940.4 in the 1970's for a 38.4 percent increase, while at the same time the cultivated land area declined by 11.3 percent. The area of cultivated land for which each member of the work force was responsible declined from an average 3.36 mu in the 1950's to 2.3 mu for a 36.5 percent drop. Quantity of labor used per mu increased from 36 in 1957 to 106, for a net increase of 70 or 194 percent in a very great increase in the intensity of labor.

As the mechanization of agriculture continuously increases, there should be a generally great decrease in the quantity of labor used. When it is considered that China's rural villages have a large labor force, in order to make the most advantage of the labor force and to search for a way out of intensive and meticulous farming, for the present and for a rather longer period of time in the future, emphasis should not be given to reduction of the quantity of labor used per mu. However, the quantity of labor used per unit of product must be reduced. But an investigation of the situation in four production teams in the Shaozhai No 5 Production Brigade showed a great increase in the quantity of labor used per mu in a comparison of 1979 with 1957, not only in the growing of wheat, barley, naked barley, paddy rice, cotton, rapeseed, and garlic, but also an increase in the quantity of labor used per unit of output for barley, rapeseed, and garlic, and for the remaining four crops the extent of reduction was not great except for wheat.

Were labor costs to be calculated on the basis of the actual cash value of workpoints for that year for the four production teams in the Shaozhai No 5 Brigade (using an average 1.59 yuan for 1957 and 1.55 yuan for 1979), then total costs per 100 jin would change as shown in the following table.

			1979 as compared to 1957	
Crop	1957 (yuan)	1979 (yuan)	± sum of money (yuan)	± percent
Wheat	12.36	11.38	- 0.98	- 8
Barley	11.44	16.22	+ 4.78	+42
Naked barley	12.63	14.30	+ 1.67	+13
Rapeseed	11.02	12.49	+ 1.47	+13
Cotton	93.70	90.48	- 3.22	- 3
Paddy rice	28.43	39.12	+10.69	+38
Garlic	9.02	12.79	+ 3.77	+42

The table shows that except for a slight cost decline for wheat and cotton, costs per 100 jin for the other crops rose. With the development of productivity, value of individual products should decline, but the above shows that in the course of more than 20 years, the value of farm products not only did not decline, but increased for many crops.

2. Procurement Price of Farm Products Lower Than Value

The rise in cost of farm products was reflected in an increase in the value of farm products. But the cost of farm products is by no means equivalent to value itself. According to the principles of commodity value formulated by Marx, the value of farm products should encompass three aspects: the value transferred through consumption of the means of production (C), + the value formed by the labor of farm workers themselves (V), + the value formed by labor for society (m). In setting the value of farm products, not only is the embodied labor of the farmers and the expenditure for the work force to be remunerated, but there has to be a certain profit realized as well for use in the expansion of further production, for the operation of collective welfare endeavors, and to take care of natural disasters. But as to just how to figure the value of farm products has always produced differences of opinion. Unless a value can be placed on farm products, it will be impossible to understand the degree to which price deviates from value. We feel that inasmuch as it was not possible to make scientific calculation of the value of farm products throughout the entire society, some representative production teams in this local area could be selected, their average consumption of materials and quantity of labor used, and a certain profit figured out for use in calculating the value of their farm products. This could be used for comparison with prevailing prices. In this way it would be possible at least to see the extent of deviation between price and value for farm products in that area, and to see the peasants' actual profits and losses.

We made a calculation of the value of farm products (called "calculated value") using costs at the four investigation points in the Shaozhai No 5 Brigade according to the formula, "production costs + a profit calculated at a profit rate that was 20 percent of costs, + taxes." The conditions of production and the level of management in those four production teams were about average for the county, and average yields per mu were close to those of the rest of the county, and were representative of them.

First some explanation of the formula used to make calculations is necessary.

1. Consumption of materials and quantity of labor used were calculated on the basis of average figures for the 3 years 1976, 1978 and 1979, (data for 1977 was incomplete) in order to eliminate some elements of chance. Quantity of labor use was converted to standard man days. Granted that some problems in administration and management existed in these production teams and that there was some irrationality in their expenditure of materials and their use of labor, nevertheless, considering the prevailing levels of productivity in China, the extent of irrationality was no more than the average level prevailing in the society at large. It was socially necessary labor, which was factored in.

2. Cost of Labor Used. There are numerous ideas about this. Here we made calculations on the basis of actual 1979 labor costs in the county, i.e. 1.80 yuan per standard work day (when actual value per day of distributions was 1.12 yuan).

Our reasons were that "setting of a value on labor includes an historical and an ethical element." Earnings in the Shanghai area are greater than in most places, and the levels of consumption are greater than in most places. If calculations were made using the uniform national 0.80 yuan labor costs, that would mean that the standard of living of the peasants would be pushed beneath the level of consumption for the society. The year 1979 was the year of maximum earnings for the rural population of Jiading during the 1970's, and fairly great improvement occurred in the livelihood of commune members. Calculations using this labor cost fairly well reflected the requirements of the work force for further production.

3. Reasons for the calculation of the rate of profit from costs. Had the rate of profit from capital been used for calculations, there would have been no way to apportion it among each of the crops. Furthermore, agricultural costs are inherently low, so the profit rate as calculated from capital would be vastly higher than in industry, which would be a flasehood; thus profit rate was calculated on the basis of costs.

But why was 20 percent chosen for the calculations? Nationally, the portion withheld by the collective during the 1970's was about 9 to 10 percent of total output value, which was 11 to 12 percent when rate of profit was calculated on the basis of costs. However, current rural village expansion of capacity for further production is very poor with quite a few places not even maintaining simple further production [to say nothing of expansion], so this rate is shown to be too low. Looked at in terms of the actual situation in Jiading, during the several years of 1965, 1966, 1968, when expansion of further production was quite good, the portion withheld by the collective amounted to between 12 and 14 percent of total output value, which would be from 14 to 16 percent of the rate of profit calculated from costs. But grassroots level cadres and commune members both said that this proportion tended to be low, and that for many communes and brigades collective accumulations showed a deficit situation, so the rate had to be increased. As compared with industry, during 1977 the average rate of profit based on cost for state owned industrial enterprises was 20 percent nationally, and in 1978, it was 24 percent. For Shanghai state-owned industries, it was 40.1 percent in 1979. The 1979 profit rate based on cost for Jiading commune and town industries was 32 percent. Therefore, figuring of agricultural profits for the Shanghai area at 20 percent must be said to have taken into full consideration the actual differences existing between agriculture and industry, and was not greater than required.

4. Revenues were calculated on the basis of average figures per mu for 1979. In the calculations of the rate of profits based on costs, revenues were not included as costs.

Now let us look at the outcome of calculations (See Table 2).

Figuring actual labor cost at 1.80 yuan per worker, the calculated value of each 100 jin of grain is 18.68 yuan, and current price is 15.2 percent lower than the value calculated. For barley, the value calculated is 23.29 yuan, and the price is 50.1 percent lower than the value. For naked barley, the value is 25.04 yuan, and the price is 48.9 percent lower than the value. For rapeseed, costs is 59.3 yuan, and prevailing cost is 39.3 percent lower than value. For cotton, value is 139.16 percent lower than value. For cotton, value is 139.16 yuan with prevailing price being 4.8 percent lower than value. For garlic, value is 28.46 percent, and prevailing price is 10.8 percent higher. For xian rice, value is 18.34 percent, or 36.2 percent

lower than prevailing price. For geng rice, value is 19.40 yuan or 29.8 percent lower than prevailing price. Except for garlic, the prices for all items is lower than the value, and in the case of barley, naked barley, rapeseed, xian rice and geng rice, the price is even lower than the cost, creating a loss, which is greatest for barley and naked barley. Nevertheless, in order to keep pace with rotational cropping in the three crop system, farmers have no choice but to grow them. The results of these calculations demonstrate that the prices paid for the major farm produces are vastly lower than their value. Of course, these calculation results are only approximations of individual value, and do not represent precise social value. In addition, determination of cost does not rest on value alone. Useful value must also be taken into consideration, as for example, the useful value of barley and naked barley which is not as great as that of wheat, so their price cannot be greater than that for wheat. Furthermore, it is necessary to take into consideration the relationship between supply and demand, and other economic and political factors. What is shown here is only the actual profit and loss situation for the farmers, and the overall tendency in the deviation between cost and value.

Table 2. Calculation of Computed Value of Major Products Per Dan at Investigation Sites

1) 作物名称		2) 小麦	3) 大麦	4) 元麦	5) 菜籽	6) 棉花	7) 大蒜	8) 早籼稻	9) 粳稻
10) 三年平均亩产(斤)	1	573	433	388	237	122.5	788	783	691
11) 三年平均每亩物质费用(元)	2	32.37	26.38	26.68	33.48	34.43	68.4	42.83	42.11
12)工 每亩用工(日)	3	29.1	29.5	27.7	44	57.2	46.5	36.1	36.2
13)费 每每工日1.8元计价(元)	4=1.80×3	52.38	53.1	49.85	79.2	102.96	83.7	64.98	65.16
14)成 每亩工本合计(元)	5=2+4	84.75	79.48	76.53	113.69	137.39	151.6	107.81	107.27
15)本 平均每百斤生产总成本(元)	6=5÷1	14.79	18.36	19.72	47.55	112.34	19.25	14.68	15.53
18) 加20%成本利润率计算每亩价值(元)	7=5×120%	101.7	95.39	91.84	135.23	164.87	181.92	129.13	128.72
19) 每亩税金(元)	8	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32
20) 每百斤生产总计算价值元/百斤	9=(7+8)/1	18.68	23.29	25.04	59.30	139.16	23.46	18.34	19.40
21)与购销价格比较 22) 每百斤收购价格(元)	10	15.60	11.60	12.80	36.0	132.50	28.0	11.70	13.60
23) ±金额元/百斤	11=10-9	-3.08	-11.69	-12.24	-23.30	-6.66	+2.54	-6.64	-5.80
± %	12=11/9	-15.2	-50.1	48.8	-39.3	-4.8	+10.8	-36.2	-29.8

Remarks: 1. Per mu use of labor calculated on three year average figures.
2. Procurement price figured from average price according to several uniform calculation methods used by municipality.

1. Name of Crop
2. Wheat
3. Barley
4. Naked Barley
5. Rapeseeds
6. Cotton
7. Garlic
8. Early Xian Rice
9. Geng Rice
10. Three year average yields per mu (jin)
11. Three year average consumption of materials per mu (yuan)
12. Wages
13. Man days used per mu
14. Cost of 1.8 yuan per man day (yuan)
15. Costs
16. Total costs per mu for labor (yuan)
17. Average cost per 100 jin of product (yuan)
18. Value per mu (yuan) when a profit rate of 20 percent of costs is figured in
19. Taxes per mu (yuan)
20. Calculation of value per 100 jin. Yuan/100 jin
21. As compared with prevailing procuremnet price
22. Procurement price per 100 jin (yuan)
23. ± sum, Yuan/100 jin

The value as calculated above is not greatly different from the price paid for farm products in free markets. In the case of polished rice, for example, the 1.80 yuan labor cost calculated for geng paddy translates to 0.28 yuan per jin of polished geng, and it sells for 0.30 yuan per jin in rural markets. In markets on the fringes of the metropolitan area, each jin costs 0.32 yuan, a difference of 14 percent. Again, in the case of rapeseed, figuring an oil production rate of 38 percent, the calculated value of rapeseed oil is 1.56 yuan per jin, while it is selling in free markets at 1.80 yuan per jin, a difference of 15 percent. Prices in the free markets are subject to the spontaneous regulation of the marketplace, and are fairly close to commodity value. This also shows that the calculations above contain a definite rationality.

3. Several Thoughts On Narrowing the Gap Between the Price and Value of Farm Products

In any consideration of the cost and price of farm products, the nub of the problem lies in how to guarantee the economic benefit of the farmers. If the cost of production of farm products is high and the prices paid for them low, the resultant increase in output with no increase in earnings, or even an increase in output with a decrease in earnings, is bound to dampen the initiative of the farmers, and have a deleterious effect on agricultural production. In the case of Jiading County, when losses from farming occurred, an abnormal situation of dependence on industry and sideline occupations to compensate occurred, and when food crops incurred losses, people turned to economic crops. The high distribution of earnings throughout the county resulted not from agricultural operations per se, but principally from the development of industry and sideline occupations. The difference in earnings from agriculture versus earnings from industry and sideline occupations was very great. In 1979, the net output value created by every member of the work force in commune operated enterprises was 2316 yuan, in brigade operated enterprises 1207 yuan, and for commune members engaged in agriculture in production teams only 557 yuan. Distributions to each member of the labor force were 619.57 yuan in commune operated enterprises, 561.29 yuan in brigade operated enterprises, and only 453.43 in basic accounting units (including 45.27 yuan from the sharing of profits from commune and brigade industries). Within the basic accounting units, losses from the growing of grain were much greater than from the growing of economic crops. Last year average per capita distributions throughout the county were slightly more than 320 yuan, but in quite a few production teams with a large grain growing area, they amounted to only somewhat more than 100 yuan. Individual income in some production teams was not only relatively less than for commune members working in industry, but absolutely less than it had been during the 1960's. In the case of Shaozhai No 5 Brigade, a comparison of 1979, when the highest average distributions of the 1970's were made, with 1965 shows an increase in earnings from 57,654 yuan to 86,622 yuan for a 50.2 percent increase, while average per capita distributions rose from 200.2 yuan to 213.6 yuan, an increase of only 6.7 percent, and distributions to every member of the work force declined from 327 yuan to 278.41 yuan, a decrease of 15.5 percent. If other years in the 1970's are compared with 1965, a decrease occurred in both distributions to every member of the work force and the average per capita distributions. Farmers sighed with emotion and said: "Whatever is most precious is also most frightening. Farming is precious so everyone fears farming. Grain is precious, so everyone fears growing grain." Rural youths all want to work in commune and brigade enterprises rather than do farming in production teams, and it took resort to administrative commands to get the farming done on grain crop areas. The severe deviation of prices paid for farm products in relation to their value violates the laws of value and has already reached a situation where it obstructs production.

It should also be pointed out that theoretically speaking the social value of farm products is determined by production expenditures for poor quality soils. If this were not so, inferior soils would be taken out of cultivation since there would be no profit from farming them. China lacks arable land; the problem of adequate grain production has not yet been solved; agricultural byproducts are unable to satisfy demand, so no problem exists in the removal of inferior land from cultivation; rather there is a need to make fullest use of available land. If a place such as Jiading, which is a place with superior soil if there ever was one, is unable to realize full value for its farm products and even suffers losses, one can imagine the situation in places with less favorable natural conditions. In China today, there are still more than 100 million farmers who find it difficult to meet life's basic needs, and the common reason is not difficult to figure out.

In order to solve the problem of disparity between prices and value, will require prompt readjustment of prices, and it will also require efforts to lower the per unit value of farm products. Let us now discuss the following several views on these two matters.

(1) Planned Continuation of Increases in the Prices Paid for Farm Products

Last year's readjustment in the prices paid for farm products were fully necessary. On the basis of the situations we investigated, current prices are between 25 and 30 percent lower than value, and figured on the basis of costs before adjustments were made, they would be between 38 and 42 percent lower. It may be seen that last year's price adjustments have shortened the gap between cost and value, the farmers gaining benefit thereby. But the present 25 to 30 percent difference is still too large, and further readjustments should be made in the prices of farm products, particularly grain and oil prices.

Adjustment of prices will encounter numerous problems. One is the limitations of state financial resources. A second is the broad area involved and the danger of causing a chain reaction that could impair the stability of the people's livelihood. Last year's price hikes revealed such a point. Third, once prices have been raised, just how much benefit the farmers get will be decided by how high the commodity rate goes. Under the present tax revenue system, it is very possible for "flowers to be added to rich brocade and frost to be added to poor snow." Investigation showed that as a result of last year's price increases, everyone averaged a 43.51 yuan increase in income, which was more than three times the national level. Differences within the county were also very great, with some communes getting increases of as much as more than 70 yuan, or as little as 10-odd yuan. Differences were even greater from one production team to another. Some production teams engaged in the growing of vegetables not only derived no benefit whatsoever from the price hikes, but suffered losses. But from an overall standpoint, readjustment of the prices paid for farm products must be done. When the price adjustments are made, consideration should be given both to the great differences between farmers and employees, and giving consideration to the smaller differences between poor and the well off among the peasantry. Support to poor communes and brigades must be intensified to help them develop production, increase their commodity rate, and share in benefits from the price rises. Tax revenues should also be adjusted whereby the state can collect some income for differences in soil from wealthy production teams.

(2) Active Growth of Industry and Sideline Occupations to Subsidize Farm Products

Despite readjustments in state prices, earnings devoted to agriculture in places where industry and sideline occupations are advanced are fairly low. Unless earnings devoted to agriculture are increased, and if everyone wants to work in industry and sideline occupations, the needed growth in agriculture cannot take place, which will be unfavorable for the overall national economy. In 1979, net income from commune and brigade operated enterprises in Jiading County amounted to 56.1 percent of net income derived from agriculture. Were a portion of profits to be allocated to the subsidization of agriculture, not only would the gap between service in industry and service in agriculture be shortened, but continued growth of industry and sideline occupations would not be impaired. In this way even if the price scissors between industrial and agricultural products in society at large would not be reduced, in some areas, a portion of the losses as a result of price scissors in the development of industry and sideline occupations could be recouped for the subsidization of losses on farm products.

(3) Effort to Lower Expenditure of Embodied Labor

Most of the increase in expenditure of materials has occurred in five items: water, fertilizer, pesticides, seeds, and machines. A comparison of 1963 and 1979, for which data were available, average expenditures for materials per mu increased from 45.60 yuan to 76.58 yuan in the county for a 68 percent increase. Expenses for seed rose from 6.54 yuan to 12.48 yuan, an increase of 91 percent. Expenses for fertilizer rose from 23.92 yuan to 39.95 yuan, a 67 percent increase. Expenses for pesticides went from 2.98 yuan to 7.22 yuan, a 142.3 percent increase; expenses for machinery and power drainage and irrigation rose from 2.29 yuan to 4.78 yuan for a 109 percent increase; and expenses for repair of machines and tools went from 2.28 yuan to 7.01 yuan, an increase of 207 percent. There were some good reasons for these increases. Increases in the proportion of embodied labor in the value of products are an inevitable tendency in the development of productivity. But there were also some bad reasons for these increases, principally two. One was poor quality and high cost of industrial goods for use in agriculture. The farmers reported one after another on the poor quality of pesticides and chemical fertilizers, on short measures, on farm machines not suited to needs, on the lack of equipment for them, on their proneness to damage, and on their high cost. Statistics show that of the 93 million yuan worth of farm machines in the county, disabled machines and unrepairable machines have a value of 11.87 million yuan or 12.8 percent. The second reason was improper use, such as applying fertilizer with no attention to proportions, using pesticides without thought to the time, and not very good care of farm machines and tools. Therefore, we must begin by improving the quality of industrial articles used in agriculture and by improving efficiency in use, making every effort to lower waste of embodied labor.

(4) Increases in Soil Production and Labor Productivity

When consumption for production is fixed, the higher the per mu yields the less the per unit value of farm products. When consumption of materials for a quantity of output is fixed, the greater the saving in labor, the higher the productivity rate of labor, and the lower the per unit value of farm products. Which is the more important: increasing the soil productivity rate or increasing the labor productivity rate? Here we can make calculations for both.

1. In order to assure the farmers a 1.80 yuan wage for their labor and a 20 percent profit solely from farming, given current costs and prices, by how much would yields per mu have to be increased? See Table 3.

1) 作物名称	9) 每亩计算价值(元)	10) 每斤收购价(元)	11) 每亩产量应为(斤)	12) 全县平均亩产(斤)	13) 与现在亩产相比 每亩增收(斤)	每亩增收 15)
	1	2	3=1÷2	4	5=3-4	6=5÷4
2) 小麦	107.02	15.80	677	588	89	15.0
3) 大麦	100.71	11.60	868	480	388	81.0
4) 元麦	97.16	12.80	759	449	310	69
5) 棉花	170.10	332.5	188.4	112.2	16.2	14.4
6) 油菜籽	140.65	36.0	390.4	237	153.4	64.8
7) 籼稻	134.46	11.70	1149	742	407	55
8) 粳稻	134.04	15.80	985.5	634.5	350.9	55.3

Key:

1. Crop name
2. Wheat
3. Barley
4. Naked barley
5. Cotton
6. Rapeseed
7. Xian rice
8. Geng rice
9. Calculated value per mu (yuan)
10. Procurement price per dan (yuan)
11. Output per mu should be (jin)
12. Average 1979 yields per mu in county (jin)
13. As compared with current per mu yields
14. Required increase (jin)
15. Required percentage increase

Except for wheat and cotton, per mu yields of other crops will have to increase by 50 percent. Comprehensive calculations made on the basis of the existing crop structure show need for a 44.2 percent increase in yields per mu.

2. Supposing no change in yields per mu and no change either in prices or use of materials, in order for farmers to get a 1.80 yuan distribution of income and a 20 percent profit as calculated from basic costs, by how much would the quantity of labor have to be reduced? (which is to say by how much would the labor productivity rate have to increase?) Results of calculations show that for wheat, use of labor per mu would have to drop from the present 31.1 people to 24.2 peroople for a 22.2 percent drop. For barley, labor use would have to decline from 31.5 people to 7.4 people or 76.5 percent. For naked barley, it would have to fall from 31.1 people to 8.6 people, or 73.2 percent. For cotton, the reduction would have to be from 64.8 people to 48.2 people, or 25.6 percent. For rapeseed, the needed reduction would be from 46.8 people to 16.3 people, or 65.2 percent. For xian rice, it would nave to fall from 40.8 people to 12.6 people, or 69.1 percent, and for geng rice from 34.2 people to 12.6 people, or 63.2 percent. On the basis of comprehensive calculations for the composition of the area sown in 1979, the labor productivity rate would have to rise 52 percent. In 1979, the work force engaged in farming throughout the county numbered 154,466 people. Were 70 percent of this work force to be put to use in production of the seven aforementioned crops, as a result of increases in the labor productivity rate, there would be a surplus of 56,441 people in the work force.

In Jiading County, crop yields per mu have declined, and under present conditions, to increase them again by 40 percent without increasing consumption of materials and the quantity of labor used would clearly be very difficult. However, a great

potential exists for cutting down on the amount of labor used while increasing the labor productivity rate. On the basis of experiences at the Malu Production Brigade test site last year, by properly equipping existing farm machines, increases of from 30 to 40 percent in labor productivity are entirely possible. It may be seen from this that in view of the realities of Jiading County, even though further intensive cultivation will be necessary to increase output per unit of area, we should have in mind a reduction in labor use to increase the labor productivity rate. Only after the labor productivity rate has increased, and the material wealth created by each farmer has become greater, will economic benefits be substantially guaranteed. With an increase in the labor productivity rate and the transformation of the work force into a new productive force for the further development of industry and sideline occupations, further accumulation of capital for agriculture will be possible to increase the equipping of agriculture and create the conditions for the growth of agriculture. Increase in labor productivity rate will lead to increase in the commodity rate, and then adjustments in the prices of far products will be more effective. But in order to increase the productivity rate of labor, it will be necessary to increase investment in agriculture to increase the level of mechanization. This cannot help but be limited by available capital, and furthermore, a large part of the work force will have to be otherwise accommodated. Under present circumstances, there is a need to broaden avenues by developing labor intensive industries and sideline occupations to solve the problem of opportunities for the work force. Without setting back the farming season, more flexibility in time might be given commune members for household sideline occupations, which would both reduce unnecessarily concentrated use of labor to increase per unit price distributions and would increase wealth for society.

The question of the price for farm products has broad implications. Only by keeping in mind assurance of economic benefits for the farmers, and joint efforts by the state and the collective to take all actions that current conditions allow can the passive situation with regard to agriculture be shaken off.

9432
CSO: 4007

BRIEFS

NO LIVESTOCK POLICY CHANGE--Last year, following decline in grain production in the Shanghai suburbs, the authorities concerned in the Shanghai Municipal Government reiterated the policy of no change in policies for the raising of hogs and poultry that had been set by the Third Plenary Session of the 11th Party Central Committee. At the same time, they acted promptly to solve the problem of a shortage in animal feed by way of preparing for a stabilization in hog, poultry, and egg output this year. Last year the Shanghai suburbs sustained fairly severe natural calamities, and preliminary statistics show a decline of about 25 percent in grain output. After state requisition grain purchases, grain for the consumption of commune members, and seed grain for the entire suburban area are subtracted, if marketing of live hogs this year continues at the 3.16 million level of last year, there will be a shortage of more than 400 million jin of feed grain. Leadership authorities concerned have clearly stated that no changes will be made in three different ways in the output of hogs, poultry, and eggs. This means that there will be no change in the program for building the suburbs into non-staple food bases to serve the city. There will be no change in the feed policies set following the Third Plenary Session. Feed produced for the raising of hogs will continue to be supplied by state grain units and the collective with the grain units being responsible for award sales of feed, the communes and brigades being responsible for basic feeds, and feeds produced for poultry and egg production continuing to be provided by the national grain units in an exchange of feed for poultry and eggs. Marketing quotas for hogs, poultry, and eggs are to be stabilized without change at last year's levels. [Text] [Beijing RENMIN RIBAO in Chinese 17 Jan 81 p 1] 9432

CSO: 4007

BRIEFS

COTTON CONFERENCE--It was pointed out at the recent 5-day conference on cotton production that ensuring the areas sown with cotton this year is the foundation, while establishing and putting on a sound basis the system of production responsibility is the key link. The participants pointed out that all units which have established the system of production responsibility have increased their cotton production. In 1980, 80 percent of the units throughout the province had established a form of this system. Some 50 percent have firmly persisted in their efforts to develop the production responsibility system. The participants revealed that the state has assigned the province the task of growing 3.6 million mu of cotton this year. The total output should be 1.6 million dan. All areas must therefore fulfill these production quotas. At present, the areas sown with cotton in the province are still 100,000 mu less than the state plans. [Taiyuan Shanxi Provincial Service in Mandarin 2300 GMT 6 Mar 81]

CSO: 4007

BRIEFS

PREFECTURE WHEAT--Hotan Prefecture, Xinjiang, has reduced planned wheat acreage from 400,000 mu to 250,000 mu this spring. By 25 February, the prefecture had sown spring wheat in 136,000 mu, 54 percent of the plan. It has topdressed 830,000 mu of winter wheat and planted oil-bearing crops in 2,700 mu. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 5 Mar 81]

CSO: 4007

BRIEFS

WHEAT AREA REDUCTION--The Tibet Autonomous Region has reduced nearly in half the area sown in winter wheat in order to expand planting of highland barley of which the Tibetan masses are so fond, and as well as of the industrial crops of pulses and rape. This year the people's government of the autonomous region has, in accordance with the Central Committee's directives work in Tibet, in order to satisfy the daily necessities of the Tibetan masses and accord with the natural law of Tibet, decided not to send down again production planning targets that are directive in nature. They have given the planting authority over to the masses. Moreover, beginning next year, they will raise the purchase price for highland barley. This was welcomed by the broad Tibetan masses. In the Shanan Prefecture and Lhasa Municipality where previously comparatively large areas were planted in winter wheat, the winter wheat plantings have been reduced by 43 and 38.9 percent respectively. Sag'ya County in Xigaze Prefecture reduced this year's planting of winter wheat 74.8 percent from last year. Tibetans happily say that next year they will not have to worry about having highland barley tsamba [zanba] to eat. [Text] [Beijing RENMIN RIBAO in Chinese 7 Dec 80 p 3] 9504

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SHIPING COUNTY WELL PREPARED TO COMBAT DROUGHT

Kunming YUNNAN RIBAO in Chinese 14 Jan 81 p 1

[Article by Song Xiaolin [1345 2556 2651]: "Establish a Mentality of Long Term Combat Against Disasters and Enhance Confidence in Increased Output and Increased Income; Shiping County Does a Solid Job of Preparatory Work to Combat Drought and Do Planting"]

[Text] The Shiping County CCP Committee and the County People's Government has conscientiously summarized the lessons learned during the past 2 years about a decline in output resulting from continuous drought, and has indoctrinated its cadres and the masses in overcoming the idea of leaving matters to chance, building up confidence and taking early action to do a good job of combating drought to do planting, and to do everything possible to reap a good harvest this year.

Shiping County had 2 years of serious drought during 1979 and 1980, which reduced grain output. The drought situation has still not be alleviated, and there is 8 million cubic meters less water in catchments than during 1979. An analysis of pertinent meteoroligical data shows that the drought will continue this year. Last autumn, the Shiping County CCP Committee and the County People's Government publicized this situation throughout the county to arouse cadres and masses to make full mental preparations to combat drought and do planting, to face realities as they exist in each commune and brigade and take commensurate action to seize the initiative and do a good job this year in combating drought to grow crops.

Water is the decisive element in combating drought. Since last autumn, the entire county has given intense attention to water management, to the diversion of water, and to a search for water. Communes and brigades designated people especially responsible for looking after and strictly controlling use of water from existing reservoirs and dammed pools of water from which they draw water. They have done a good job of continuing to maintain and equip existing water conservancy facilities. The two inverted siphon projects for the diversion of Sancha He flood waters is the major project in the county in which the state has already invested 600,000 yuan to accelerate construction. Baoziu Commune invested 100,000 yuan last autumn for continued building of a 10 kilometer long large channel for the Gaochong Reservoir, a high channel for the Zhangbenzhai Pumping Station, and to rebuild the Baichilin pumping station. A rational layout of sites for the planned sinking of 40 mechanized wells was done throughout the county to make fullest use of underground water resources. Required funds and materials have been readied, and the task will soon begin. Physical surveys to determine the location of 32 wells have been completed,

and once the machine-operated wells project has been completed, irrigated fields will increase by about 10,000 mu.

Next comes a good job in laying out a rational crop pattern, adjusting general methods to specific situations and preparing for floods and droughts. Last year, insufficiently vigorous guidance made impossible definitive arrangements for the crop pattern. As a result of a general feeling that planting of seedlings should await the arrival of water, more than 20,000 mu of fine farmland throughout the county remained bare. The lesson has been learned this year, and throughout the county from top to bottom ideas have been advanced on how water can be used against the drought, and from bottom to top, brigade by brigade and commune by commune, careful accounting of the use of water is being done and rational arrangements being made for converting to dryland crops the 50,000 mu of fields without water resources. If the rains come early, rice seedlings will be planted; otherwise dryland crops will be planted.

Third is vigorous promotion of the use of superior varieties and superior methods. The paddy rice most used in flatland areas is the high output "Shanyou No 2;" the principal variety used in mountain areas is "310." "Yanzhou No 1" is the hybrid corn most commonly planted. Except for some varieties bred within the county, which have been selected for use, all other needed superior varieties will be brought back from Guilin and Pingbian County by some specialists sent to Guangxi for the purpose. Maohe Commune, which plans to expand its corn acreage by 3,000 mu, has already received 25,000 jin of superior seeds from the county. Baoxiu Commune has already completely prepared the 10,000 jin of hybrid corn and the 2,000 jin of dryland millet varieties that it needs this year.

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BRIEFS

XIAOSHAN COUNTY HOG RAISING--Xiaoshan County has made headway in promoting hog raising. The county now has more than 310,000 head of hogs in the eties. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 6 Mar 81]

HUANGYAN COUNTY RICE--Huangyan County in Zhejiang Province has completed all preparations to sow early rice on its 429,000 mu of farmland. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 6 Mar 81]

FISHERY CONFERENCE--The Provincial Fishery Conference held by the Zhejiang Provincial CCP Committee and People's Government closed in Hangzhou on 6 March. Attended by 166 people, including the prefectural, municipal and county leading comrades and managers of the aquatic products supply and marketing companies, the conference laid down the tasks for fishing units this year: continuing with readjustments in fishery, vigorously developing the breeding of sea and freshwater fish, and producing more marketable fish for the people. The conference noted that offshore aquatic resources are still being seriously plundered; that there are still loopholes in the purchase, marketing and management of aquatic products; and that people in the land of fish and rice still find it hard to get fish for their consumption. [OW120040 Hangzhou Zhejiang Provincial Service in Mandarin 0400 GMT 8 Mar 81]

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II. PUBLICATIONS

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